10th Grade Lesson Plan Packet

4/20/2020-4/24/2020

GreatHearts Irving

Remote Learning Packet

NB: Please keep all work produced this week. Details regarding how to turn in this work will be forthcoming.

April 20 - April 24, 2020

Course: 10 Art

Teacher(s): Ms. Frank clare.frank@greatheartsirving.org

Weekly Plan:

Monday, April 20

☐ Exercise: Varied Levels of Contrast

☐ Develop the range of value and contrast in your self-portrait.

Tuesday, April 21

☐ Develop the range of value in your self-portrait, with particular attention to planes, shifts in value along contours, and varied levels of contrast.

Wednesday, April 22

☐ Read over the attached article about self-portraits, looking thoughtfully at the images as you do so.

☐ Of time remaining: Finishing touches on your self-portrait - or - write a sketchbook entry about the self-portraits which most interest you.

Thursday, April 23

☐ Carefully observe the self-portraits in today's reading as you read about the artist or portrait.

☐ Sketchbook entry: Briefly discuss in short paragraphs the portraits which most speak to you.

Friday, April 24

☐ Experiment with setting up a photographic portrait of yourself, in which your pose and expression, manner of dress and the items around you speak to an idea about yourself. Submit 1-3 photos.

☐ Sketchbook entry: Briefly discuss your photographic self-portrait(s).

Statement of Academic Honesty

I affirm that the work completed from the packet is mine and that I completed it independently.

I affirm that, to the best of my knowledge, my child completed this work independently.

_____

Student Signature

_____

Parent Signature

Most assignments in art this week use a pencil and your sketchbook. Keep a piece of clean folded paper handy to place below your hand as you draw to prevent smudging. If an assignment involves a photograph, you will want to make a record in your sketchbook of that photo file so that you can easily find it later. Each day's assignment is designed to take about 20 minutes for the average student to complete. If you have time remaining push your observations and skills further, either on that day's assignment or one from earlier in the week.

Monday, April 20

1. Draw 5 pairs of ½ inch squares (example below). Within these squares shade smoothly to achieve an example of high value contrast, 2 examples of low value contrast, and 2 examples of medium value contrast. Label the contrast levels below the pairs. It is important both to achieve smooth, even value application as well as to achieve the level of value contrast. An example is provided:

High Value Contrast *Low Value Contrast* *Medium Value Contrast*

2. Develop the range of value in your self-portrait, with particular attention to planes, shifts in value along contours, and varied levels of contrast.

- You should have a wide range of value, with least 6 distinct levels of value.
- Be sparing in your use of white and black. Only the brightest areas should be white - high reflection, perhaps - and only the darkest shadows in the darkest areas should be black.
- There should be areas where the transition between values is gradual, and areas where the change is more abrupt.
- You should have a wide range of value contrast. Make sure to have areas of very low, medium, and high value contrast.
- Use value contrast and transitions or gradations to imply contours; avoid actual outlines.

Tuesday, April 21

1. Carefully observe your self-portrait, considering dimensionality (how 3D it looks) and the development of planes throughout the face and head.

2. Develop the range of value in your self-portrait, with particular attention to planes, shifts in value along contours, and varied levels of contrast. (Refer to yesterday's guidelines.)

3.You may wish to add hatching and cross-hatching or cross-contour work to enhance the effect of direction and dimensionality in planes and around contours.

-

Wednesday, April 22

1. Read over the attached article about self-portraits (p. 3), looking thoughtfully at the images as you do so.

2. Of time remaining: If you need to put more finishing touches on your self-portrait, do so now. Otherwise, write a sketchbook entry about which of the self-portraits most interest you. Identify the portraits by naming the artist and work. Write using complete sentences, and describe what specific aspects of those paintings interested you - something about imagery, expression, atmosphere...?

Thursday, April 23

1. Carefully observe the self-portraits in today's reading as you read about the artist or portrait. (p. 9).

2. Sketchbook entry: Briefly discuss in short paragraphs two portraits which most speak to you. Identify the works by name and title, and describe the imagery or qualities that you find meaningful or expressive.

3. If time remains and your self-portrait would benefit, add some finishing touches, with an eye toward dimensionality and expression.

Friday, April 24

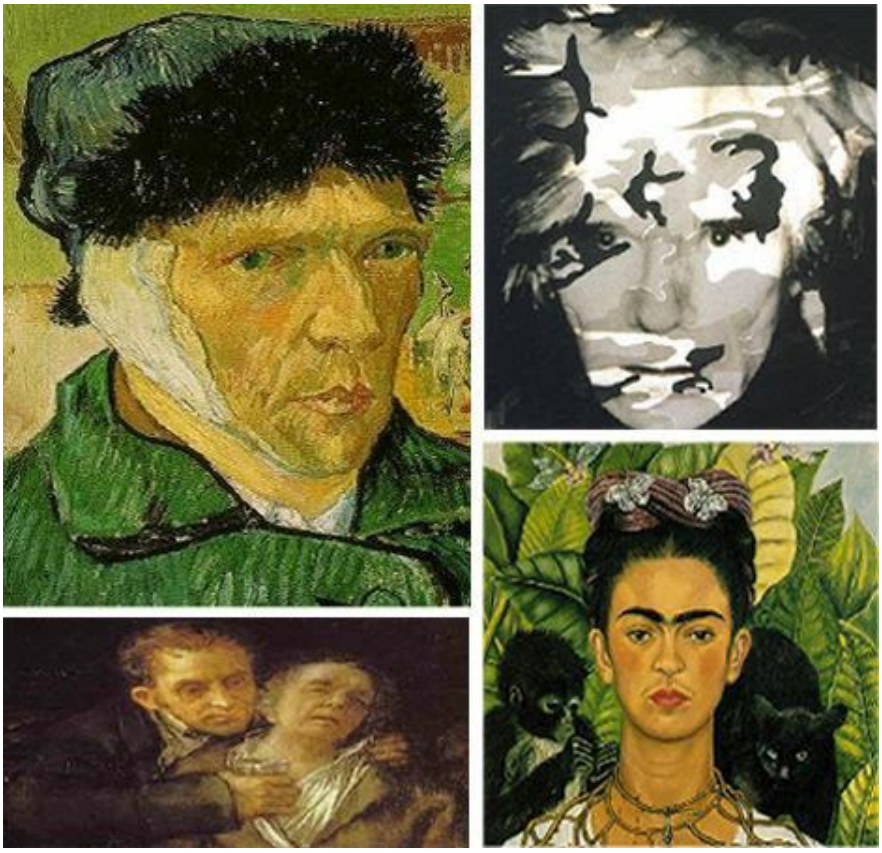
1. Experiment with setting up a photographic portrait of yourself, in which your pose and expression, manner of dress and the items around you speak to an idea about yourself. You might use a timer function to take the photograph yourself or you might direct someone else to take the photos. Choose 1-3 to submit as your assignment.

2. In your sketchbook write the photo file number(s) down so you can find the photo(s) to submit. Write some notes about the ideas you are attempting to convey through your portrait, whether through lighting, pose, objects, surroundings… You will use this information next week.

Wednesday's Reading: An article from the website WebUrbanist, a website dedicated to Architecture, Art, Design and Build Environments
https://weburbanist.com/2009/07/22/the-revealing-art-of-self-portraits/

9 Famous Painters & the Revealing Art of Self-Portraits

Article by Guest, filed under Drawing & Digital in the Art category



It's a rare artist that hasn't at one time or another attempted a self-portrait. Sometimes it's for the most obvious reason, that in painting himself he has a ready, willing and free model. At other times artists may use self-portraits to advertise their skills, practice their craft, explore some inner turmoil or stake a place in history. Whatever reason the artist might think he had for the painting though, with art as with writing, the act of creation always reveals something about the creator. Whether it's the unusual yellow ambience

of a Van Gogh or the isolation of Hitler's self-portrait it's always possible to learn a little more about the artist by reading between the brush-strokes.

Albrecht Dürer (1471–1528)

(image source: wikimedia)

The German painter Albrecht Durer was perhaps the first really prolific self-portraitist, producing at least twelve images of himself, including three oil portraits, and figures in four altar pieces. He was something of a child prodigy, painting from an early age, and by his twenties was selling his works all over Europe. He was highly conscious of his public image and reputation and I believe we can see that in this self-portrait which depicts him in an idealized way, elaborately groomed and dressed in the very latest Italian fashion to demonstrate to the world his international success. Although he was only a young man at the time, he was clearly confident of his talent and aiming to go far.

Rembrandt Harmenszoon van Rijn (1606–1669)

(image via: wikipedia)

The Dutch artist Rembrandt was also a prolific painter of self-portraits. At one time about ninety paintings were counted as Rembrandt self-portraits, but it is now known that he had his students copy his own self-portraits as part of their training. Art experts currently believe that he was responsible for over forty paintings, as well as a few drawings and thirty-one etchings, which is still pretty impressive. An interesting aspect of Rembrandt's

self-portraits, other than their undoubted quality, is what we can discover in their sheer number and time-span. They record his progress from an uncertain young man, through his time as a very successful portrait-painter in the 1630s, to the later troubled but powerful self-portraits of his old age.

Francisco José de Goya y Lucientes (1746 – 1828)

(image via: wikimedia)

The Spanish painter Goya occupies a unique place in art history, regarded by many as the last of the old masters and first of the moderns. He was a court painter to the Spanish Crown and a chronicler of history, who was bold in handling color and regarded as daring for the subversive elements in his art. In later years he suffered physical and mental breakdown, complaining of deafness, poor vision and loss of balance. Postmortem diagnosis pointed toward possible paranoid dementia due to unknown brain trauma. This self-portrait of him with Dr Arrieta reflects his troubled state of mind, with its themes of illness and mortality.

Vincent Willem van Gogh (1853 – 1890)

(image via: courtauld.ac.uk)

Think about a ‘tormented artist’ and one of the first names that come to mind is likely to be Van Gogh. This Dutch post-impressionist is probably as well known for [having cut off his own ear] (which may or may not have happened as reported) as he is for his considerable body of work. One of the characteristics of his paintings is the sunny

yellow ambiance that infuses them. Van Gogh indulged heavily in absinthe, a drink known to produce ‘yellow vision’ in addicts. The drug digitalis, which he is also believed to have taken, would also produce ‘yellow vision’. Interestingly and strangely enough, Van Gogh never seems to look directly at his ‘audience’ in his self-portraits.

Claude Oscar Monet (1840 – 1926)

(image via: monetalia)

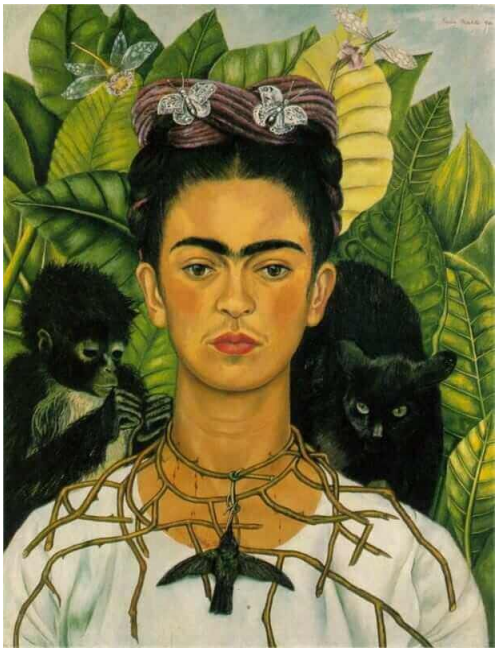
Monet was a founder of the French impressionist style of painting, which is based on the artist conveying his perceptions of the subject rather than a precise likeness. The term ‘impressionism’ is in fact derived from the title of Monet’s painting ‘Impression, Sunrise’. [...]

Toulouse Lautrec (1864 – 1901)

(image via: toulouse-lautrec-foundation)

Henri Marie Raymond de Toulouse-Lautrec-Monfa or simply Henri de Toulouse-Lautrec was a French artist famous for his depictions of the theatrical and decadent life of fin de siecle Paris. Looking at this self-portrait you see in the mirror the reflection of a young man, handsome and apparently normal in all ways that are visible. The reality was somewhat different. As a child he fractured both thigh bones and the breaks did not heal properly.

His legs ceased to grow, so that as an adult he was only 5 ft tall, with an adult-sized torso but child-sized legs which were only 27.5 in long.



Frida Kahlo (1907 – 1954) (image via: fridakahlo.org)

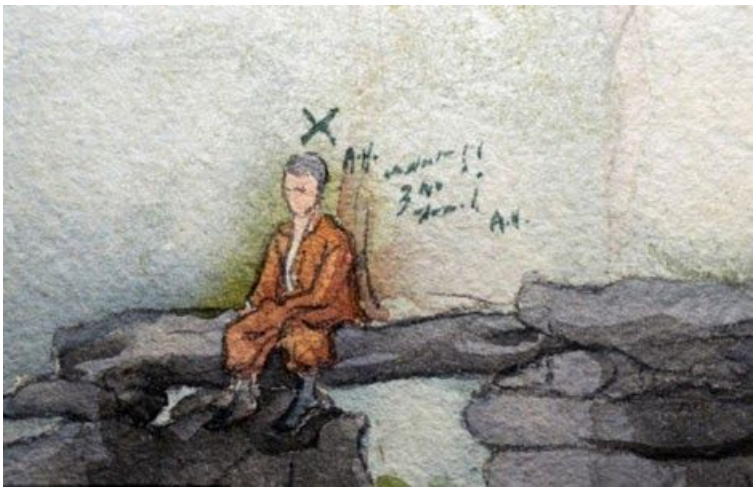
When looking at [Kahlo's *Self-Portrait with Thorn Necklace and Hummingbird*, from 1940], the pain is evident in her face. Pain and determination are both things that characterized this artist's difficult life. Magdalena Carmen Frida Kahlo y Calderón spent many years bedridden following a terrible accident, with only herself for a model. Despite her handicaps she painted prolifically using vibrant colors in a unique style influenced by the indigenous cultures of Mexico and European influences including Realism, Symbolism and Surrealism. Many of her works are self-portraits that symbolically express her own pain and [identity]. The 50 or so of them include many of herself from the waist up, and also some nightmarish representations which symbolize her physical sufferings. She insisted, "I never painted dreams. I painted my own reality."

Andrew Warhol (1928 – 1987) (image via: artquotes)

Andy Warhol, darling of the 1960s New York art scene and prince of 'pop art', was a self-styled enigma who hid himself away in the full glare of the world's media . Though he courted publicity skilfully and at times obsessionally, he was an intensely private person. In manipulating the media he was a master of misdirection and 'playing dumb', always claiming that all all anyone needed to

know about him and his works was already there, “on the surface”. It's not surprising then that what I see in this self-portrait is an artist who, even while saying to the world ‘hey this is me’, still attempts to camouflage and obscure the reality.

Adolf Hitler (1889 – 1945)



(image via: dailymail)

And here, as they say, is a man who needs no introduction. I think we’re all pretty familiar with his main claims to fame (or infamy) but one of his lesser known aspirations was to be an artist. This watercolor is thought to be the earliest self-portrait by Adolf Hitler, painted in 1910 when the future Fuhrer was 21 and struggling to make his mark on the art world. The figure is strangely anonymous, with no nose or mouth yet Hitler was keen to identify himself by daubing a cross and the initials AH above it. The loneliness of someone who cannot connect with the world around him or the people in it rests on the surface of the self-portrait. Perhaps this was just a romantic vision Hitler had of himself, or perhaps it was a genuine expression of a deeper alienation.

A Selection of Great Self-Portraits, Renaissance to Contemporary

I am indebted to The Guardian, a British newspaper, for much of the test that follows below: https://www.theguardian.com/artanddesign/jonathanjonesblog/2014/sep/04/the-top-10-self-portraits-in-art-lucian-freud-sherman-rembrandt

Judith Leyster - Self-Portrait, 1630

Judith Leyster's Self-Portrait exudes self-confidence in her abilities, and it has become one of the National Gallery of Art's most popular Dutch paintings. Leyster has depicted herself at her easel, briefly interrupting work on a painting of a violin player to interact with the viewer. ... By juxtaposing her hand holding a brush with the hand and bow of the violin player, Leyster cleverly compares the art of creating ephemeral music with the art of creating timeless paintings. She holds the tools of her trade—a palette, a cloth, and no fewer than eighteen brushes. In reality she would not have worn the elegant dress and lace-trimmed collar while at work in her studio. (https://www.nga.gov/collection/art-object-page.37003.html)

Artemisia Gentileschi – Self-Portrait as the Allegory of Painting (1638-39)

The muses are female in ancient Greek mythology. For 17th-century painter Artemisia Gentileschi, one of the few women to have a successful career in art in early modern Europe, this was an opportunity. Where a male artist might show himself portraying a woman dressed up as a muse or with a picture of a muse behind him, Gentileschi can show herself personifying painting. Yet any acceptance of a subordinate allegorical role is fiercely contradicted by her tough, muscular image. Painting is a woman, painting is a hero, painting is a worker.

(from The Guardian)

Cindy Sherman - Untitled Film Still #21, 1978

The concept of self-portraiture is dismantled in the works of Cindy Sherman, which depict the artist but never reveal her "true" self. Her art is a masquerade, an endless series of roles that portray her as a hero or monster. This image comes from Sherman's early and most poetic series, in cinematic black-and-white, in which she imagines herself as a Hitchcock or film-noir character in an American landscape, where anything can happen. (text: The Guardian) (image: moma.org)

Lucian Freud – Reflection With Two Children (Self-Portrait) (1965)

(Photograph: Mondadori via Getty Images)

The artist is a colossal father figure in this uneasy painting. Seen in a mirror, he dwarfs his tiny children. It is a painting of alienated and anxious self-consciousness. Mirrors have been essential tools of self-portraiture since Parmigianino's time. In this and other paintings by Freud, that technical fact is made disturbingly explicit as the artist coldly views his reflected image. It is as if he is painting a monstrous stranger. Freud's self-portraiture exposes at its sharpest his acute sense of the discomfort of being a person. (from The Guardian)

Lucian Freud - Reflection, 1985 (Image: Irish Museum of Modern Art)

Lucian Freud, a British artist, was one of the greatest realist painters of the 20th century, renowned for his portrayal of the human form. In this painting you can see Freud's distinctive approach to portraiture, a raw realism with thickly applied paint and shapes that are simultaneously brushwork. His work has a physically visceral quality and communicates an honest, intense scrutiny. Freud was intensely private. He often asked subjects to sit for hundreds of hours over multiple sittings to better capture the essence of their personality.

Rembrandt - Self-Portrait With Two Circles (c 1665-69)

Photograph: English Heritage

To stand in front of this painting is to be scrutinised and found wanting. Rembrandt looks at you with eyes that are dark portals of consciousness, memory and time. He is paused in the act of painting, dressed in the robes of a master. The enigmatic circles behind him represent a world he is making. The richness of the paint is somehow incidental to the shocking, undeniable feeling that a real person looms before you. Rembrandt is a magus; his spell heals and inspires.

(from The Guardian)

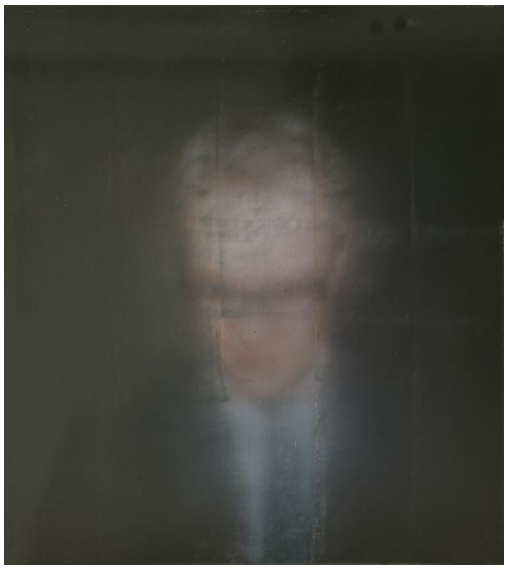
Rembrandt - Self-Portrait With Saskia (1636)

Photograph: Heritage Images/Getty Images

The artist lets us see everything in this etching – how he works and how he lives. In fact, art and life are gloriously inseparable for Rembrandt. He is sitting happily at home with his wife, Saskia, their mutual contentment cosily apparent. His shadowed face and drawing hand contemplate their combined image in a mirror that reveals art not as a remote formal activity, but as a part of life.

(from The Guardian)

.



Gerhard Richter - Selbstportrait (1996)

Gerhard Richter is a well-known contemporary German artist recognized for his mastery of a wide variety of styles. One of his most recognized styles is one where the painting looks like a photograph, even in how it might be blurred. In this painting, *Selbstportrait*, from 1996, the artist depicts himself as he looks towards the ground. The mood is very different from a painting in which the artist engages with the viewer. While in a way this has the snapshot immediacy of a photograph it communicates something of how the photograph acts as a veil, a mediation between the viewer and subject. Notice that the image has the look of a worn photo that may have been folded.

(Image from: https://www.gerhard-richter.com/de/art/paintings/photo-paintings/portraits-people-20/self-portrait-8185/?p=1)

Parmigianino - Self-Portrait in a Convex Mirror (c 1524)

Photograph: Heritage Images/Getty Images

It's not only modern artists who portray themselves in thought-provoking ways. In the early 16th-century, Parmigianino looked at himself in a convex mirror and painted his distorted reflection, his huge hand close to the surface of the picture, his face the focus of a selfie-like bubble image, in which time and space warp vertiginously. This precocious painting is the theme of John Ashbery's great poem, Self-Portrait in a Convex Mirror.

(from The Guardian)

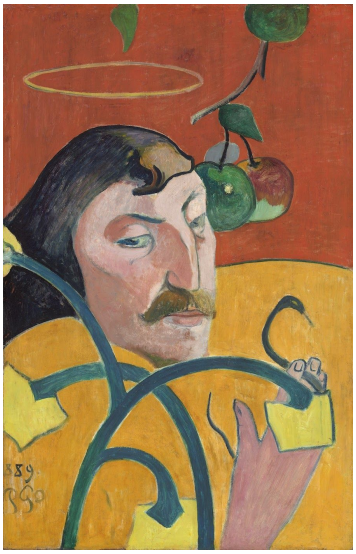
Gustave Courbet - The Desperate Man, 1845

Courbet's self-portrait *The Desperate Man*, combines elements of Romanticism—a style that was prominent until the middle of the 19th century—and Realism, a movement that would eventually be pioneered by Courbet in such works as *The Stonebreakers* and *The Floor Scrapers*.

Jacob Lawrence - Self Portrait, 1977

Jacob Lawrence was a 20th century American painter and storyteller, who described his work as "dynamic cubism" influenced by the lively and dynamic shapes and colors of Harlem. Shortly before his death in 2000 he stated "...for me, a painting should have three things: universality, clarity and strength. Clarity and strength so that it may be aesthetically good. Universality so that it may be understood by all men."

Paul Gauguin - Self-Portrait with Halo and Snake - 1889



Paul Gauguin was a Post-Impressionist painter who for a time worked closely with Vincent van Gogh. Characteristics of Gauguin's work include a colorful palette, symbolism of both color and imagery, a decorative flatness of composition, a strong sense of movement, and underlying religious themes. This self-portrait incorporates all those qualities, with recognizable Western iconography about good, evil, and the role of making a choice. Notice the dual role of the snake as a flowering plant and the way Gauguin has divided the picture plane in two.

This oil-on-wood painting can be found in the National Gallery of Art in Washington, D.C.

Edvard Munch - Self-Portrait with the Spanish Flu (1919)
(image: wikifiles)

Edvard Munch was a 20th century Norwegian artist known best for his Expressionist paintings and prints that had symbolism and an atmospheric energy verging on angst. In this painting he depicts himself as he recovers from the Spanish Flu of 1918, a pandemic that killed many around the world. His face appears skeletal, with an empty expression, and you see his bedding to the left as he sits in a robe, a blanket over his knees. The painting has the expressive colors and brushwork typical of his work, but the formality of the design and the open light area around his face conveys a stillness.

Remote Learning Packet

NB: Please keep all work produced this week. Details regarding how to turn in this work will be forthcoming.

April 20 - 24, 2020

Course: 10 Chemistry

Teacher(s): Ms. Oostindie megan.oostindie@greatheartsirving.org

Weekly Plan:

Monday, April 20

☐ Read pp. 301-302

☐ Complete Acid-Base Reactions Equilibria worksheet

Tuesday, April 21

☐ Read and record notes for sections 10.6-10.7 (pp. 303-305)

☐ Answer questions related to dissociation constants in notes

Wednesday, April 22

☐ Complete and grade practice problems: p. 327 #47, 61, 62

Thursday, April 23

☐ Read and record notes for section 10.8 (pp. 306-307)

☐ Answer questions related to pH in notes

Friday, April 24

☐ Read and record notes for section 10.9 (pp. 308-310)

☐ Complete and grade practice problems: p. 328 #64, 65, 70

Statement of Academic Honesty

I affirm that the work completed from the packet is mine and that I completed it independently.

I affirm that, to the best of my knowledge, my child completed this work independently

_____

Student Signature

_____

Parent Signature

Monday, April 20

Re-read page 301 and read the application section on page 302. Note you will need to follow the in-text reference to 10.14 "Reaction of Acids with Bicarbonate and Carbonate Ion" to read more about antacids. Using the information you just read, complete the attached Acid-Base Equilibria worksheet.

Tuesday, April 21

Read and record notes for sections 10.6-10.7 (pp. 303-305). Take notes of the key vocabulary terms and their definitions as well as any diagrams, equations, and worked examples. Do not answer the questions in yellow boxes. Notes can be taken in a notebook or on separate paper.

Answer the following questions related to the sections in complete sentences at the end of your notes.

1. Describe the similarities and differences between K_a and K_w.
2. In an aqueous solution, if the concentration of OH^- is high what must be true about the concentration of H_3O^+?
3. Which concentration value would be higher when solving for the K_a of a strong acid, $[A^-]$ or [HA]? Why?

Wednesday, April 22

Complete practice problems: p. 327 #47, 61, 62. Clearly label each response with the question number and letter. After you have attempted all questions, use the attached answer key and grade your assignment in a different color pen. Not all questions will be self-graded; some answers have been deliberately omitted from the key for grading once your packet has been turned in.

Thursday, April 23

Read and record notes for section 10.8 (pp. 306-307). Follow the same directions for note taking as listed under Tuesday's lesson.

Answer the following questions related to the sections in complete sentences at the end of your notes.

1. What does the letter p signify?
2. How much more acidic is a solution with a pH value of 4 than a solution with a pH value of 5?
3. As acidity increases, what is the effect on the pH value?

Friday, April 24

Read and record notes for section 10.9 (pp. 308-310). Follow the same directions for note taking as listed under Tuesday's lesson.

Complete practice problems: p. 328 #64, 65, 70. After you have attempted all questions, use the attached answer key and grade your assignment in a different color pen. Not all questions will be self-graded; some answers have been deliberately omitted from the key for grading once your packet has been turned in.

If you are unsure of how to calculate pH using your calculator, see the attached images of where to find the log and antilog functions on the most commonly owned calculators.

_____
_____
_____
_____

GreatHearts Irving

Acid-Base Reactions Equilibria

Directions: Fill in the missing portions of the following chemical reactions. Label each substance as an acid (A), base (B), conjugate acid (CA) or conjugate base (CB). Using the table on p. 300, circle the stronger acid between the original acid or conjugate acid. Finally, draw in the equilibrium arrows to indicate which side of the reaction is favored. The first question has been completed for you as an example.

1. $NaOH$ + H_2SO_4 ⇌ H_2O + HSO_4^-

   ___B___ ___A___ __CA____ ___CB___

2. HCl + $CaCO_3$ ☐ H_2CO_3 + $CaCl_2$

   _____ _____ _____ _____

3. $NaNO_3$ + HF ☐ HNO_3 + NaF

   _____ _____ _____ _____

Directions: Read the application selection found on p. 302 and answer the following questions in complete sentences.

1. How do antacids help treat GERD?

2. How do proton-pump inhibitors help treat GERD?

3. What are the benefits of having an extremely acidic stomach environment?

4. Which of the reactions listed above demonstrates the reaction that occurs when an antacid is consumed?

p.327 #47, 61, 62

47. Label the Brønsted-Lowry acids and bases in the following equations, and tell which substances are conjugate acid-base pairs.

a) $CO_3^{2-}(aq) + HCl(aq) \rightarrow HCO_3^-(aq) + Cl^-(aq)$

B A CA CB

b) $H_3PO_4(aq) + NH_3(aq) \rightarrow H_2PO_4^-(aq) + NH_4^+(aq)$

A B CB CA

61. Find Ka values in Table 10.2, and decide which acid in the following pairs is stronger:

a) HCO_3H (4.3×10^{-7}) or (HF) (3.5×10^{-4})

b) (HSO_4^-) (1.2×10^{-2}) or HCN (4.9×10^{-10})

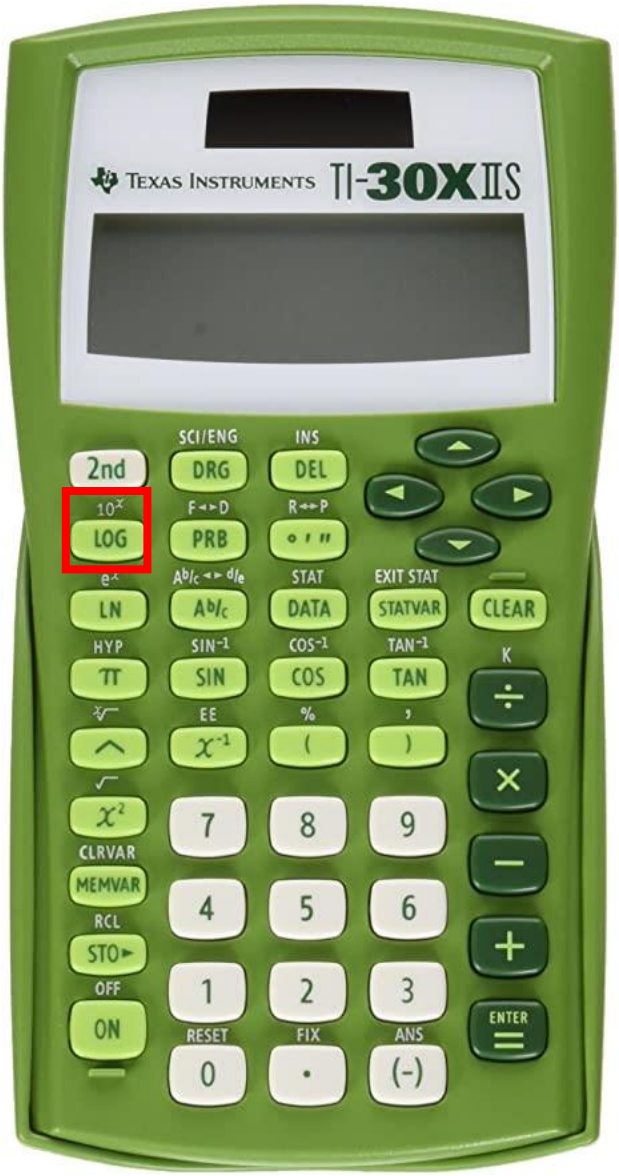
62. Which substance in the following pairs is the stronger base? Look at Table 10.1 if necessary.

a) OH^- or PO_4^{3-}

b) Br^- or NO_2^-

c) NH_3 or OH^-


TI-84 Plus
Texas Instruments
STAT PLOT F1 TBLSET F2 FORMAT F3 CALC F4 TABLE F5
Y= WINDOW ZOOM TRACE GRAPH
2ND
A-LOCK
ALPHA
MATH
APPS
PRGM
VARS
CLEAR
MODE
DEL
LINK
X,T,Θ,n
LIST
STAT
SIN
COS
TAN
LOG
LN
STO
ON
ENTRY SOLVE
ENTER


Texas Instruments TI-30XIIS
2nd
LOG
SCI/ENG
DRG
INS
DEL
PRB
STAT
DATA
EXIT STAT
STATVAR
CLEAR
LN
HYP
TT
SIN
COS
TAN
CLRVAR
MEMVAR
RCL
STO
OFF
ON
RESET
FIX
ANS
ENTER

p. 328 #64, 65, 70

64. The electrode of a pH meter is placed in a sample of mine, and a reading of 7.9 is obtained. Is the sample acidic, basic, or neutral? What is the concentration of H_3O^+ in the mine sample?

BASIC

pH = 7.9

$[H_3O^+] = 10^{-7.9}$

$= \boxed{1.3 \text{ (1.258)} \times 10^{-8} \text{ M}}$

65. A 0.10M solution of the deadly poison hydrogen cyanide, HCN, has a pH of 5.2. Is HCN acidic or basic? Is it strong or weak?

ACIDIC

pH = 5.2

WEAK

according to Table 10.1 AND

$[H_3O^+] = 10^{-5.2} = 6.3 \times 10^{-6} M$

$6.3 \times 10^{-6} M$ is much less than 0.10M meaning not many HCN molecules have dissociated so it is a weak acid

70. Approximately what pH do the following H_3O^+ concentrations correspond to?

a) fresh egg white: $[H_3O^+] = 2.5 \times 10^{-8} M$

$pH = -\log(2.5 \times 10^{-8}) = \boxed{7.6}$

GreatHearts Irving

Remote Learning Packet

NB: Please keep all work produced this week. Details regarding how to turn in this work will be forthcoming.

April 20 - 25, 2020

Course: 10th Grade Economics

Teacher(s): Mr. Loomis

Weekly Plan:

Monday, April 13

☐Take the quiz on the history of finance; closed book

Tuesday, April 14

☐Read and answer questions

Wednesday, April 15

☐Read and answer questions.

Thursday, April 16

☐Read and answer questions.

Friday, April 17

☐Read and answer questions.

☐Homework: Quiz on this week's material; focus on *Key Terms*

Statement of Academic Honesty

I affirm that the work completed from the packet is mine and that I completed it independently.

I affirm that, to the best of my knowledge, my child completed this work independently

_____

Student Signature

_____

Parent Signature

Monday, April 20th

Quiz - Basic Principles and History of Finance

Match the terms on the right with the correct definitions:	
Definitions	**Terms**
____ the capital raised by a business through the sale of shares.	1. Capital
____ risk is greater because there is more at stake for the fewer people involved.	2. Interest
____ a certificate issued by a government or a public company promising to repay borrowed money at a fixed rate of interest at a specified time.	3. A loan
____ wealth, usually in the form of money, owned by a person or company.	4. Cheap Money
____ a company owned and financed by shareholders.	5. Expensive Money
____ something given for a limited amount of time (here money) that is expected to be returned.	6. A Bond
____ the more spread out an investment is (the more people share the risk) the less risky it is.	7. Shares
____ a group of individuals or organizations combined to promote some common interest.	8. Stock
____ when the interest rate on borrowed money is low.	9. Concentrated risk
____ money paid regularly at a particular rate for the use of money lent. It is expressed as a percentage of the total amount that is not repaid.	10. Diluted risk
____ one of the equal parts into which a company is divided, entitling the holder (investor) to a part of the profits.	11. A security
____ when the interest rate on borrowed money is high.	12. A Joint-Stock Company
____ a financial item that can be bought or sold. For example, a bill of exchange, a loan or a share.	13. A syndicate

Multiple Choice Questions

- Modern financial history begins around the XIIIth century in:
  - ❏ Venice
  - ❏ Amsterdam
  - ❏ Florence
  - ❏ London

- The first major European capital of finance in the XVIIth century is:
  - ❏ Venice
  - ❏ Antwerp
  - ❏ Amsterdam
  - ❏ London

- After 1688, financial practices slowly migrate to this city, eventually making it the center of international finance in the XIXth century:
  - ❏ Venice
  - ❏ Paris
  - ❏ London
  - ❏ Amsterdam

Notes:

- From what I have been hearing, the assignments are taking longer than the assigned time (20-30mn). Unless you want to spend longer on the assignments, please time yourself and do not spend longer than 30mn. In doing this you should try to go over everything, even if imperfectly; don't fall prey to perfectionism and only finish a quarter of the work. The quizzes and grading will reflect the fact that time is limited for this class.
- Answer the questions that are included with the lesson.
- I am including a list of *Key Terms* you are expected to either already be familiar with, or to learn. On top of this you should be familiar with the financial concepts that we learned last week.

Tuesday, April 21st

Function of Financial Institutions
Banks, Fractional Reserve Banking and the Money Multiplier Effect

What is a bank and how does it work? Please follow along with the illustration below.

1. Suppose three groups of persons: the first (A) with extra, unused, capital/savings for which they have no immediate use (1), the second, entrepreneurs, with no access to capital but ideas for creating it in the future (B), and a third, middlemen, who can coordinate the two and make a profit by storing and lending money (C).
2. (C) decides to construct an institution to house (keep safe) (A)'s unused capital (1) in exchange for paying them interest on it (I.A). That institution is a specific type of business called a bank.
3. (C) decides to take a part (a *fraction*) of that money (let us call it (1.1)) and keep it safe in the bank, and to lend a large part of it (1.2) to (B) for them to start their business. (C) does this in exchange for interest paid by B to C (I.B). This way, the bank (C) earns money from (B) for storing (A)'s unused capital. This system is called Fractional Reserve Banking and is how most commercial banks operate.

Question: Do the words *fractional* and *reserve* make sense to you?

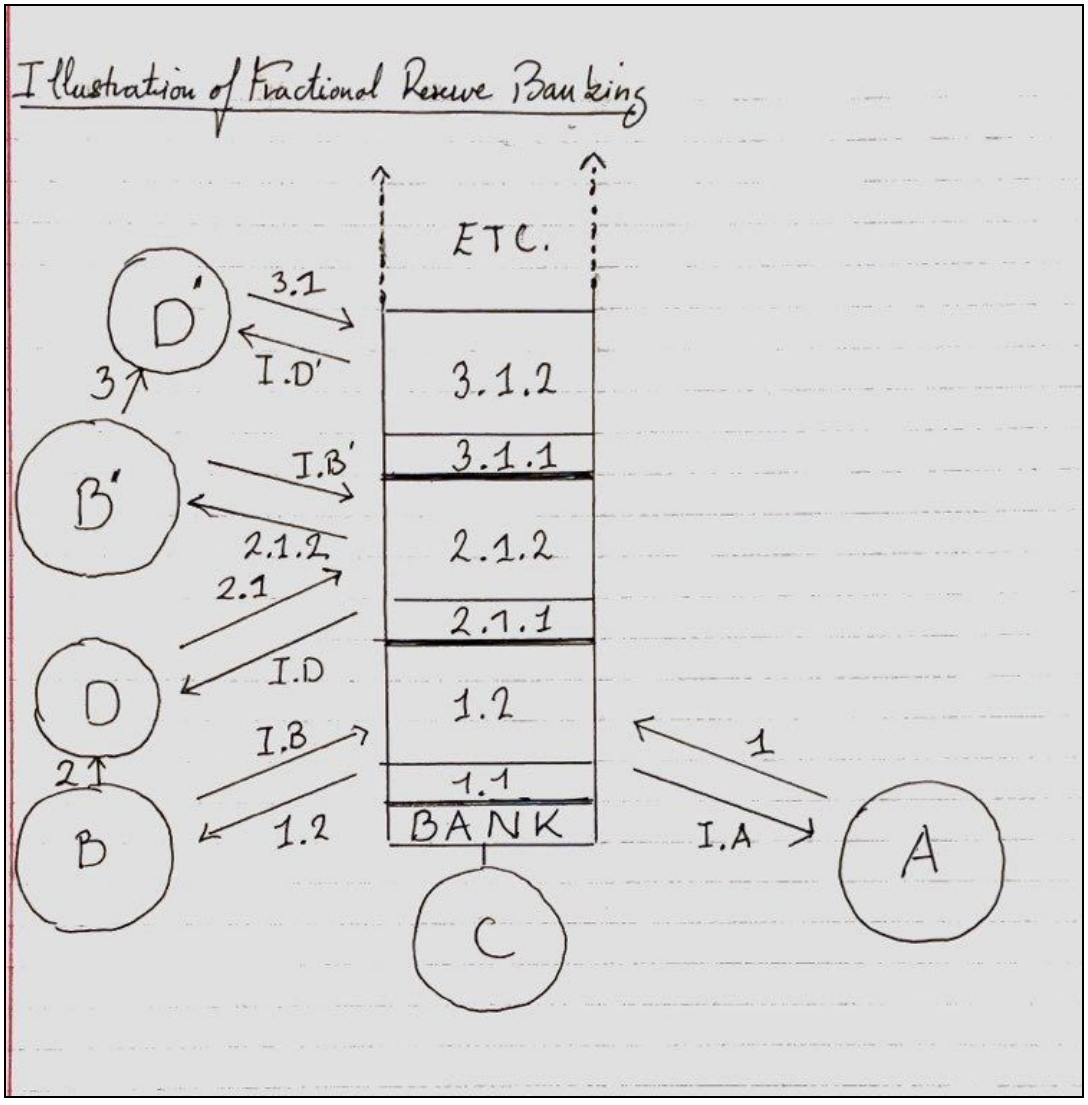
4. Now imagine a fourth group (D) who are the workers that are employed by (B)'s businesses which pays them a wage (2). Let us suppose that (D) puts part of that wage (2.1) into the bank in exchange for interest (I.D).The bank then repeats the same process as with (A)'s money (see illustration: 2.1.1, 2.1.2, B', I.B, D', 3, 3.1, I.D', 3.1.2, etc). If (C)'s investments in (B) and (B') are good investments and the businesses do well, you can start to see how the bank can make even more money, *ad infinitum*. This generates *wealth* (valuable things for the economy) for the bank AND for the businesses AND for the workers, ie. for the whole economy. We studied the birth of this thing last week during our history of finance section.

Question: Do you understand how wealth is created, not just for the bank but for the rest of the economy as well?

5. Some caveats are:
    a. The bank needs to make sure that the interest paid from (C) to (A) is less than the interest paid from (B) to (C).
    b. Typically some *depositors* (those who put their money in the bank) will decide to take out all of their money. Normally this is not a problem because there are enough depositors that (C) has enough reserves. However, if *all* depositors suddenly decide to take all of their money out of the bank at once then the bank does not have enough reserves. This iscalled a <u>bank run</u> and is an economic disaster. This is what happened during the Great Depression (1929-33). Fortunately in 1933 the *Federal Deposit Insurance Corporation*, a government agency, was created to insurance deposits. Nowadays deposits are insured up to $250,000.

Question: Why does 5.a have to be true?
Question: Why is 5.b true?

<u>Illustration:</u>



Wednesday, April 22nd

Note: Our previous study of both the history of finance and the ways in which banks work should make us familiar with the fundamental framework within which money is stored, accessed and exchanged. Let us now look into some specifics of how people use these institutions in their lives.

Savings and Checking Accounts

The two most common types of bank accounts are a *checking* and a *savings* account .

Checking accounts: they are designed to give people easy access to their money. They can be used to deposit checks, pay bills, and even transfer money between accounts. They have no limits on withdrawals and transfers, and they come with both checks and a debit card (a card used for taking money directly out of the account, more below). This makes them an ideal homebase for your money.

Savings accounts: they have no online bill pay and no debit cards (for the most part). In addition some transactions, such as online transfers, are limited to six times per month, beyond which fees are charged. Unlike most checking accounts, all funds kept in a savings account earn a small amount of interest (average .09% yearly). It is small because the money put into a savings account isn't subject to risk and you can always access it. This makes savings accounts a great home for an emergency fund, and savings that you might need in the not too distant future. There are types of savings accounts that earn greater interest: Money Market Accounts (2%+) and Certificates of Deposit (2.5-3%).

Both of these kinds of accounts are available at any commercial bank. The next step is to understand the process of *investing*, which you should already be basically familiar with from our history of finance and banking sections.

Question: What is the most basic way that a person fills his checking and savings account with money?
Question: How do you think a person should think about the relationship between their checking and their savings accounts?
Question: What do you think an emergency fund is?
Question: At what point do you think a person can say that they are ready to invest?

Investing

Person (A) makes an income and plans to spend 50% of it on rent and utilities, and another 30% of it on food and fun activities. The last 20% of that income he saves (think of person (A) in our section on banking). He might save it in a savings account or leave it in a checking account. However, this might not be a good idea because 1) why would you not earn money on it, especially if you are not using the money and 2) because of *Inflation*. *Inflation* is the idea that prices for goods and services rise over time. For example, in the 1950's you could buy a loaf of bread for 12 cents (around $2.5 in 2019) and a new house for $10,000 (in Dallas, in 2020: $251,918). Another option is to *invest* that money, either in a higher earning savings account (see above) if you want a *low risk* investment, or in a *higher risk* investment. Think of the relationship between risk and reward from our section on the history of finance. I also want you to think of investment as a loan that *you* are making in return for interest.

Let us take a look at two common forms of investment, *stocks* and *bonds*.

Bonds: for definition see 4/13 lesson. In return for the money that you lend called the *principal*, you'll receive a fixed amount of interest per year, plus your money back once the bond expires. Because of this guarantee bonds are the safest kinds of investments. As a result the interest rate is low as well.

Stock/shares: for definition idem. bonds. People buy and sell shares in places called stock exchanges. When the company whose shares you own does well then the share price goes up and you make money and vice-versa. These fluctuations can make stocks risky. The way you earn money is when you sell the shares and when the company pays you *dividends*. Dividends are a portion of the company's earnings that are paid to each shareholder.

Question: How do you think that order of importance might change over the course of a person's life?
Question: What do you think is the difference between a conservative and an aggressive investor?

Thursday, April 24th

Retirement

Investments are important for understanding how to plan for retirement. There are two basic kinds of accounts that you will need to know about: *IRAs* and *401(k)s/403(b)s*.

401(k)s and 403(b)s: These are retirement investment accounts. They are offered by either a for-profit employer, in the case of a 401(k), or a nonprofit or government employer, in the case of 403(b). In either case, your employer may match your contributions up to a certain amount, such as 5% of your total salary.

IRA (Individual Retirement Account): This type of account is very similar to the previous one. The differences are that your contributions to an IRA are more limited. You cannot contribute as much in general and the contribution amount is limited by your income.

Both of these types of retirement accounts come in two forms, *Traditional* and *Roth*. The difference between these two is that in a Traditional account the money you put in is pre-tax, and then only taxed when withdrawn at retirement. With a Roth it is the opposite. If you expect your tax rate to be higher in retirement, choose a *Roth IRA*. If you expect lower rates in retirement, choose a *Traditional IRA*.

Question: Why is it important to plan for retirement and to do so early?
Question: Can you think of other ways to plan for retirement besides investment accounts?

Loans and Borrowing

Loans are the basic elements of the financial framework that we have been studying. Think back to Mesopotamia, through Greece, Rome, Medieval Venice, the Renaissance, etc. Without lending and borrowing, there is no financial system. By now, we should have a good sense of how loans work, but let us look at them on a more practical level.

On their most basic level, loans are borrowed money. *Lenders*, such as banks, give *borrowers* a fixed amount of money called a *principal* for them to spend on whatever they need or want. As we have seen, the lender does this in exchange for *interest*.

We know that a major component of an interest rate is risk, but what does it look like concretely? Let's say someone borrows $10,000 for a car, and the annual rate is 5%. Divide that 5% by 12 months, and you get the monthly rate which is 0.4%.That person owes the bank 0.4% of the principal each month in interest.

Interest rates come with three complications:

1. Not all interest rates are *fixed*. Some, called *variable interest rates*, can change over time, often quite dramatically. Because of this, they can be quite risky, especially on long-term loans.
2. The interest rate of a loan is not the same thing as its *Annual Percentage Rate* (APR). APR includes both the interest rate, either fixed or variable, and the fees. You should always use the APR when comparing loans.
3. APRs are also highly dependent on your *credit score* (see below), as the lower your score, the higher your APR.
4. You also have to consider the *term* of the loan. The term of the loan is how long the lender is giving you to repay it. The shorter the term of the loan, the greater your monthly loan payment but the lower the interest rate, and vice versa.

Question: Why did I say that "Loans are the basic elements of the financial framework that we have been studying. [...] Without lending and borrowing, there is no financial system." (4-5 sentences, open question)

Question: Is it possible to live a life without taking out a loan? (4-5 sentences, open question)

Friday, April 25th

Debit and Credit Cards

Debit and *credit* cards are just pieces of plastic that give you access to something. They aren't anything in and of themselves but they are *means* to something. That something is money. You might ask, whose?

Debit cards: As mentioned above they allow you to take out (to debit) money from your checking account. Sometimes you can take it out of your savings but there are usually fees for this. The formula is very simple. You can use the card as long as there is money in your bank account, and as soon as there is none, then you cannot.

Credit cards are more complicated, but given what we have studied you should have no issues understanding. They are simply loans. Think of them as permanently available loans of varying sizes. They are very easily accessible through a swipe of your card and they need to be paid off every month.

Each time a person uses a credit card the bank loans him the money. If they don't pay it all off by the due date then they have to pay interest. This can get very expensive very quickly, especially when factoring in the high APRs of a credit card. The range of APRs is currently from around 15% to 22%. This does not, however, include *Penalty APRs* when you are consistently late on your payments. These can go up to about 30%. The advantage associated with these cards is that they offer their users rewards, such as cash back or airline miles, each time they make a purchase.

Question: Which card seems to work better for which kinds of situations?
Question: What is the prerequisite character trait necessary for the use of a credit card?

Credit Reports and Credit Score

A necessary result of taking out loans--and in our society people are always taking out loans-- is the *reputation* that a person develops for paying (or not paying) them back. Remember when we were discussing *risk* last week? When banks decide whether or not to loan money, they consider whether a person is a more or less risky borrower. The main way that this is measured is through *Credit Reports* and *Credit Scores*.

A Credit Report: It is a detailed history of your *credit* history. Credit is the ability of a customer to obtain goods or services before payment, based on the trust that payment will be made in the future. The most common measurement of this is the FICO credit score. This is a calculated number between 300 and 850 that summarizes your *credit report*. The higher your score, the lower the interest rates and vice-versa.

Briefly, a *credit score* is measured using five variables, from most to least important:

1. Payment history: are bills paid on time?
2. Credit utilization: how much of your total available credit do you use? Less, but not too little, is better.
3. Length of credit history: how long have you been using credit? Longer is better.
4. Recent inquiries for credit: how many applications for credit have you submitted recently? Fewer is better.
5. Types of credit used: How many different types of credit are you using? Fewer is better.

Question: Why do you think the concept of credit is so important to our society? Do you agree with this valuation? Another way I might phrase this question is, do you think the measure of credit is a measure of virtue or vice? (5 - 10 sentences, open question)

Key Concepts and Vocabulary

Note: This list does not include the concepts from last week's lesson on the history of finance which you are expected to know (shares, stock, interest, etc.).

Banks, Fractional Reserve Banking and the Money Multiplier Effect

- A bank
- Fractional Reserve Banking
- The Money Multiplier Effect
- A bank run

Savings and Checking Accounts

- Checking account
- Savings account

Investing

- Inflation
- Dividends

Retirement

- 401(k) and 403(b)
- IRA
- Traditional and Roth

Loans and Borrowing

- Lender and borrower
- The principal of the loan
- Variable interest
- APR
- A loan term

Debit and Credit Cards

- Debit and vs credit cards
- Penalty APR

Credit Reports and Credit Score

- Credit
- A credit report
- A credit score
- 5 variables of the credit score

Remote Learning Packet

NB: Please keep all work produced this week. Details regarding how to turn in this work will be forthcoming.

April 20-24, 2020

Course: 10 Humane Letters

Teacher(s): Mr. Garner ben.garner@greatheartsirving.org

Weekly Plan:

Monday, April 20

- [ ] Read *Crime and Punishment*, Part Three, chapter 6
- [ ] Answer chapter 6 reading questions

Tuesday, April 21

- [ ] Read pages 592-601 in *Western Heritage*
- [ ] Answer history reading questions

Wednesday, April 22

- [ ] Read *Crime and Punishment*, Part Four, chapters 1 and 2
- [ ] Answer chapters 1-2 reading questions

Thursday, April 23

- [ ] Read pages 602-606 in *Western Heritage*
- [ ] Read and annotate “Ode to a Nightingale” by John Keats (pages 130-131 in history sourcebook)
- [ ] Answer history questions

Friday, April 24

- [ ] Read *Crime and Punishment*, Part Four, chapter 3
- [ ] Answer chapter 3 reading questions

Monday, April 20

- Read and annotate Part Three chapter 6 carefully, paying special attention to the following points:
    - By the end of this chapter, Raskolnikov is once again in a "feverishly ecstatic mood." In his feverish rantings to himself, mark carefully what he reveals about his original intentions and motives for killing, and his own current attitude towards his crime. Is he remorseful? If so, what is the real cause for his remorse?
    - Take note also of the increasingly blurred lines between reality and raving in Raskolnikov's mind. There are moments in this chapter where it is not immediately clear if Raskolnikov is imagining things or not - most interestingly, when he meets the tradesman in the street. How do we know that the tradesman is real? Could the tradesman be another phantom of Raskolnikov's fevered imagination?
- Answer the following reading questions in 3-4 complete sentences each.

Crime and Punishment Part three, chapter 6

1. At one point on page 275, Raskolnikov begins talking about Lizaveta and Sonya, implicitly comparing the two characters. In what ways are the two characters similar? Why do you think Raskolnikov associates them in his own mind?

2. Describe Raskolnikov's dream at the end of the chapter. Are there any similarities to previous dreams Raskolnikov has had?

Tuesday, April 21

- Read the following pages from *Western Heritage* history text (included after reading questions).
- Answer the following reading questions in 3-4 complete sentences each.

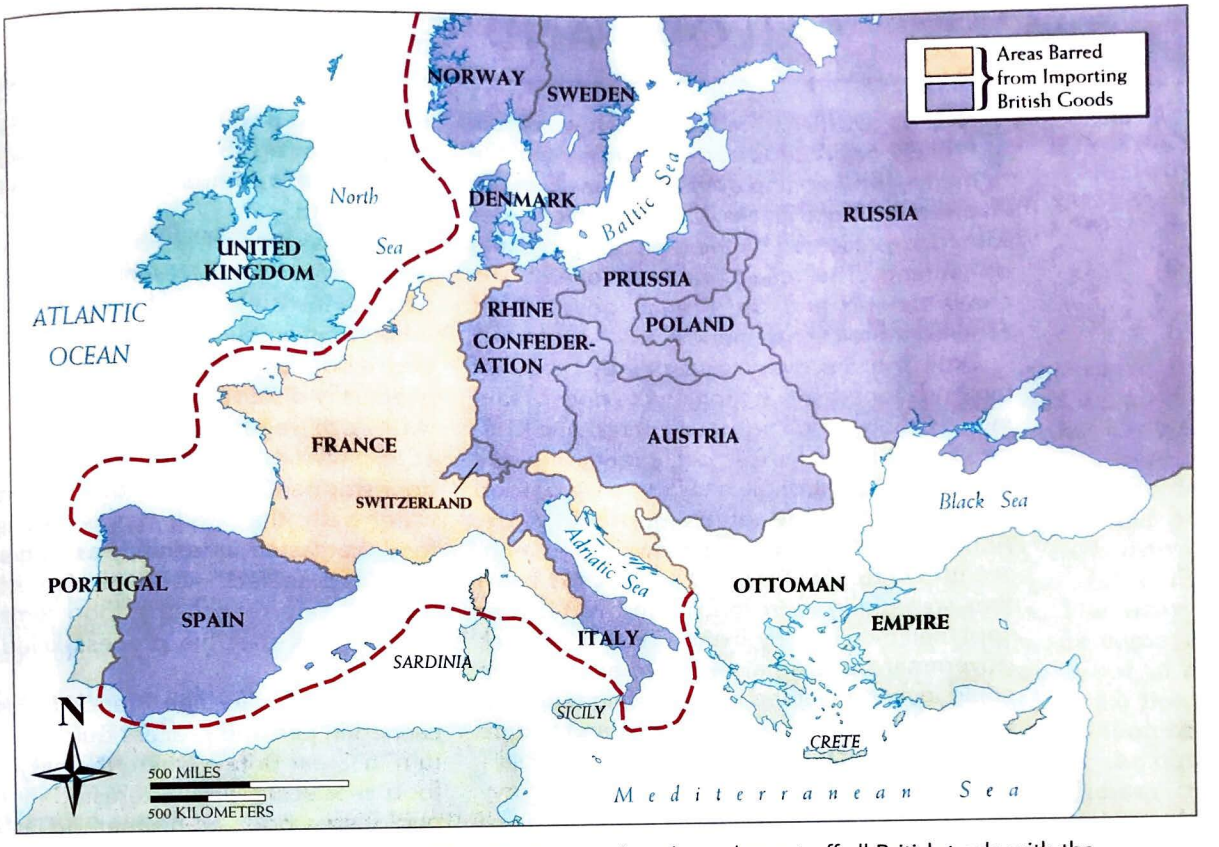
1. Why did Napoleon decide to invade Russia? Why did the operation fail?

2. What were the results of the Congress of Vienna? Was the Vienna settlement a success?

In this 1806 caricature by the famous English artist James Gillray, Napoleon is shown as a baker who creates new kings as easily as gingerbread cookies. His new allies in the Rhine Confederation, including the rulers of Württemberg, Bavaria, and Saxony, are placed in the "New French Oven for Imperial Gingerbread." 'Tiddy-Doll, the Great French Gingerbread Maker, Drawing Out a New Batch of Kings. His Man, Hopping Talley, Mixing Up the Dough', pub. by Hannah Humphrey, 23rd January 1806 (aquatint), Gillray, James (1757–1815). Leeds Museums and Galleries (City Art Gallery) U.K./The Bridgeman Art Library International

▼ European Response to the Empire

Wherever Napoleon ruled, he imposed the Napoleonic Code and abolished hereditary social distinctions. Feudal privileges disappeared, and the peasants were freed from serfdom and manorial dues. In the towns, the guilds and the local oligarchies that had been dominant for



Map 19–1 **THE CONTINENTAL SYSTEM, 1806–1810** Napoleon hoped to cut off all British trade with the European continent and thereby drive the British from the war.

centuries were dissolved or deprived of their power. The established churches lost their traditional independence and were made subordinate to the state. Toleration replaced monopoly of religion by an established church. Despite these reforms, however, it was always clear that Napoleon's policies were intended first for his own glory and that of France. The Continental System demonstrated that Napoleon's rule was intended to enrich France, rather than Europe generally. Consequently, before long, the conquered states and peoples grew restive.

Read the Document "Carl von Clausewitz, On War, 'Arming the Nation' " on **MyHistoryLab.com**

German Nationalism and Prussian Reform

The German response to Napoleon's success was particularly interesting and important. There had never been a unified German state. The great German writers of the Enlightenment, such as Immanuel Kant and Gotthold Lessing, were neither deeply politically engaged nor nationalistic.

At the beginning of the nineteenth century, the Romantic Movement had begun to take hold. One of its basic features in Germany was the emergence of nationalism, which went through two distinct stages there. Initially, nationalistic writers emphasized the unique and admirable qualities of German culture, which, they argued, arose from the history of the German people. Such cultural nationalism prevailed until Napoleon's humiliation of Prussia at Jena in 1806.

At that point many German intellectuals began to urge resistance to Napoleon on the basis of German nationalism. The French conquest endangered the independence and achievements of all German-speaking people. Many nationalists also criticized the German princes, who ruled selfishly and inefficiently and who seemed ever ready to lick Napoleon's boots. Only a people united through its language and culture could resist the French onslaught. No less important in forging a German national sentiment was the example of France itself, which had attained greatness by enlisting the active support of the entire people in the patriotic cause. Henceforth, many Germans sought to solve their internal political problems by attempting to establish a unified German state, reformed to harness the energies of the entire people.

After Tilsit, only Prussia could arouse such patriotic feelings. Elsewhere German rulers were either under Napoleon's thumb or collaborating with him. Defeated, humiliated, and diminished, Prussia continued to resist,

however feebly. German nationalists from other states fled to Prussia. Once there, they called for reforms and unification that King Frederick William III (r. 1797–1840) and the Junker nobility feared and hated. Reforms came about despite such opposition because the defeat at Jena had shown that the Prussian state had to change to survive.

The Prussian administrative and social reforms were the work of Baron vom Stein (1757–1831) and Prince von Hardenberg (1750–1822). Neither of these reformers intended to reduce the autocratic power of the Prussian monarch or to end the dominance of the Junkers, who formed the bulwark of the state and of the officer corps. Rather, they wanted to fight French power with their own version of France's weapons. As Hardenberg declared,

> Our objective, our guiding principle, must be a revolution in the better sense, a revolution leading directly to the great goal, the elevation of humanity through the wisdom of those in authority. . . . Democratic rules of conduct in a monarchical administration, such is the formula . . . which will conform most comfortably with the spirit of the age.[2]

Although the reforms came from the top, they wrought important changes in Prussian society.

Stein's reforms broke the Junker monopoly of landholding. Serfdom was abolished. However, unlike in the western German states where all remnants of serfdom disappeared, in Prussia the Junkers ensured that vestiges of the system survived. Former Prussian serfs were free to leave the land if they chose, but those who stayed had to continue to perform manorial labor. They could obtain the ownership of the land they worked only if they forfeited a third of it to the lord. The result was that Junker holdings grew larger. Some peasants went to the cities to find work, others became agricultural laborers, and some did actually become small freeholding farmers. In Prussia and elsewhere, serfdom had ended, but the rise in the numbers of landless laborers created new social problems.

Military reforms sought to increase the supply of soldiers and to improve their quality. Jena had shown that an army of free patriots commanded by officers chosen on merit rather than by birth could defeat an army of serfs and mercenaries commanded by incompetent nobles. To remedy the situation, the Prussian reformers abolished inhumane military punishments, sought to inspire patriotic feelings in the soldiers, opened the officer corps to commoners, gave promotions on the basis of merit, and organized war colleges that developed new theories of strategy and tactics.

View the Map "Interactive Map: The Unification of Germany 1815–1871" on MyHistoryLab.com

These reforms soon enabled Prussia to regain its former power. Because Napoleon strictly limited the size of its army to 42,000 men, however, Prussia could not introduce universal conscription until it broke with Napoleon in 1813. Before that date, the Prussians evaded the limit by training one group each year, putting them into the reserves, and then training a new group the same size. Prussia could thus boast an army of 270,000 by 1814.

The Wars of Liberation

Spain In Spain more than elsewhere in Europe, national resistance to France had deep social roots. Spain had achieved political unity as early as the sixteenth century. The Spanish peasants were devoted to the ruling dynasty and especially to the Roman Catholic Church. France and Spain had been allies since 1796. In 1807, however, a French army came into the Iberian Peninsula to force Portugal to abandon its traditional alliance with Britain. The army stayed in Spain to protect lines of supply and communication. Napoleon used a revolt that broke out in Madrid in 1808 as a pretext to depose the Spanish Bourbons and to place his brother Joseph (1768–1844) on the Spanish throne. Attacks on the privileges of the church were interpreted as attacks on Catholicism itself, and increased public outrage. Many members of the upper classes were prepared to collaborate with Napoleon, but the peasants, urged on by the lower clergy and the monks, rebelled.

In Spain, Napoleon faced a new kind of warfare. Guerrilla bands cut lines of communication, killed stragglers, destroyed isolated units, and then disappeared into the mountains. The British landed an army under Sir Arthur Wellesley (1769–1852), later the duke of Wellington, to support the Spanish insurgents. Thus began the long peninsular campaign that would drain French strength from elsewhere in Europe and hasten Napoleon's eventual defeat. (See "Compare and Connect: The Experience of War in the Napoleonic Age," pages 596–597.)

Austria France's troubles in Spain encouraged Austria to renew the war in 1809. Since their defeat at Austerlitz, they had sought a war of revenge. The Austrians counted on Napoleon's distraction in Spain, French war weariness, and aid from other German princes. Napoleon was fully in command in France, however, and the German princes did not move. The French army marched swiftly into Austria and won the Battle of Wagram. The resulting Peace of Schönbrunn deprived Austria of substantial territory and 3.5 million subjects.

Another spoil of victory was the Austrian archduchess Marie Louise (1791–1847), daughter of Emperor Francis I. Napoleon's first wife, Josephine de Beauharnais (1763–1814), was forty-six and had borne him no

[2]Geoffrey Brunn, *Europe and the French Imperium* (New York: Harper & Row, 1938), p. 174.

children. His dynastic ambitions, as well as the desire for a royal marriage, led him to divorce Josephine and marry the eighteen-year-old Marie Louise. Napoleon had also considered marrying the sister of Tsar Alexander, but had received a polite rebuff. The emperor of Austria, however, was in no position to refuse the match.

The Invasion of Russia

The failure of Napoleon's marriage negotiations with Russia emphasized the shakiness of the Franco–Russian alliance concluded at Tilsit. Russian nobles disliked the alliance because of the liberal politics of France and because the Continental System prohibited timber sales to Britain. Only French aid in gaining Constantinople could justify the alliance in their eyes, but Napoleon gave them no help against the Ottoman Empire. The organization of the Polish Duchy of Warsaw as a Napoleonic satellite on the Russian doorstep and its enlargement with Austrian territory in 1809 after the Battle of Wagram angered Alexander. Napoleon's annexation of Holland in violation of the Treaty of Tilsit, his recognition of the French marshal Bernadotte (1763–1844) as the future King Charles XIV of Sweden, and his marriage to Marie Louise further disturbed the tsar. At the end of 1810, Russia withdrew from the Continental System and began to prepare for war. (See Map 19–2.)

Napoleon was determined to end the Russian military threat. He amassed an army of more than 600,000 men, including a core of Frenchmen and more than 400,000 other soldiers drawn from the rest of his empire. He intended the usual short campaign crowned by a decisive battle, but the Russians retreated before his advance. His vast superiority in numbers—the Russians had only about 160,000 troops—made it foolish for them to risk a battle. Instead, they followed a "scorched-earth" policy, destroying all food and supplies as they retreated. The so-called Grand Army of Napoleon could not live off the country, and the expanse of Russia made supply lines too long to maintain. Terrible rains, fierce heat, shortages of food and water, and the courage of the Russian rear guard eroded the morale of Napoleon's army. Napoleon's advisers urged him to abandon the venture, but he feared an unsuccessful campaign would undermine his position in the empire and in France. He pinned his faith on the Russians' unwillingness to abandon Moscow without a fight.

In September 1812, Russian public opinion forced the army to give Napoleon the battle he wanted despite the canny Russian general Mikhail Kutuzov's (1745–1813) wish to let the Russian winter defeat the invader. At Borodino, not far west of Moscow, the bloodiest battle of the Napoleonic era cost the French 30,000 casualties and the Russians almost twice as many. Yet the Russian army was not destroyed. Napoleon won nothing substantial, and the battle was regarded as a defeat for him.

Napoleon underestimated the Russians' willingness to sacrifice Moscow in the interests of victory. In order to deprive French troops of food, fuel, and housing, the Russians set fire to Moscow as they abandoned the city to the invading army. Napoleon was left far from home with a badly diminished army lacking adequate supplies as winter came to a vast and unfriendly country. After capturing the burned city, Napoleon addressed several peace offers to Alexander, but the tsar ignored them. By October, what was left of the Grand Army was forced to retreat. By December, Napoleon realized the Russian fiasco would encourage plots against him at home. He returned to Paris, leaving the remnants of his army to struggle westward. Perhaps only 100,000 of the original 600,000 survived their ordeal.

European Coalition

Even as the news of the disaster reached the West, the final defeat of Napoleon was far from certain. He was able to put down his opponents in Paris and raise another 350,000 men. Neither the Prussians nor the Austrians were eager to risk another contest with Napoleon, and even the Russians hesitated. The Austrian foreign minister, Prince Klemens von Metternich (1773–1859), would have preferred to make a negotiated peace that would leave Napoleon on the throne of a shrunken and chastened France rather than see Russia dominate Europe. Napoleon might have negotiated a reasonable settlement had he been willing to make concessions that would have split his jealous opponents. He would not consider that solution, however. As he explained to Metternich,

> Your sovereigns born on the throne can let themselves be beaten twenty times and return to their capitals. I cannot do this because I am an upstart soldier. My domination will not survive the day when I cease to be strong, and therefore feared.[3]

In 1813, patriotic pressure and national ambition brought together the last and most powerful coalition against Napoleon. The Russians drove westward, and Prussia and then Austria joined them. Vast amounts of British money assisted them. From Spain, Wellington marched his army into France. Napoleon's new army was inexperienced and poorly equipped. His generals had lost confidence in him and were tired. The emperor himself was worn out and sick. Still, he waged a skillful campaign in central Europe and defeated the allies at Dresden. In October, however, the combined armies of the enemy decisively defeated him at Leipzig in what the Germans called the Battle of the Nations. In March 1814, the allied armies marched into Paris. A few days later, Napoleon abdicated and went into exile on the island of Elba, off the coast of central Italy.

[3]Felix Markham, *Napoleon and the Awakening of Europe* (New York: Macmillan, 1965), pp. 115–116.

Map 19–2 **NAPOLEONIC EUROPE IN LATE 1812** By mid-1812 the areas shown in peach were incorporated into France, and most of the rest of Europe was directly controlled by or allied with Napoleon. But Russia had withdrawn from the failing Continental System, and the decline of Napoleon was about to begin.

▼ The Congress of Vienna and the European Settlement

Fear of Napoleon and hostility to his ambitions had held the victorious coalition together. As soon as he was removed, the allies pursued their separate ambitions. Nevertheless, Robert Stewart, Viscount Castlereagh (1769–1822), the British foreign secretary, brought about the signing of the Treaty of Chaumont on March 9, 1814. It provided for the restoration of the Bourbons to the French throne and the contraction of France to its frontiers of 1792. Even more importantly, Britain, Austria, Russia, and Prussia agreed to form a Quadruple Alliance for twenty years to preserve whatever settlement they agreed on. Remaining problems—and there were many—and final details were left for a conference to be held at Vienna.

View the **Map** "Map Discovery: Europe After the Congress of Vienna, 1815" on **MyHistoryLab.com**

Territorial Adjustments

The Congress of Vienna assembled in September 1814, but did not conclude its work until November 1815. Although a glittering array of heads of state attended the gathering, the four great powers (Britain, Russia, Prussia, and Austria) conducted the important work of the conference. The only full session of the congress met to ratify the arrangements the big four made. The easiest problem the great powers faced was France. All the victors agreed that no single state should be allowed to dominate

Europe, and all were determined to prevent France from doing so again. The restoration of the French Bourbon monarchy, which was temporarily popular, and a nonvindictive boundary settlement were designed to keep France calm and satisfied.

The powers also strengthened the states around France's borders to serve as barriers to renewed French expansion. They established the kingdom of the Netherlands, which included Belgium and Luxembourg, in the north and added the important port of Genoa to strengthen Piedmont in the south. Prussia was given important new territories along the Rhine River to deter French aggression in the West. Austria gained full control of northern Italy to prevent a repetition of Napoleon's conquests there. As for the rest of the German states, most of Napoleon's territorial arrangements were left untouched. The venerable Holy Roman Empire, which had been dissolved in 1806, was not revived. (See Map 19–3.) In all these areas, the congress established the rule of legitimate monarchs and rejected any hint of the republican and democratic policies that had flowed from the French Revolution.

On these matters agreement was not difficult, but the settlement of eastern Europe sharply divided the victors. Alexander I of Russia wanted all of Poland under his rule. Prussia was willing to give it to him in return for all of Saxony, which had been allied with Napoleon. Austria, however, was unwilling to surrender its share of Poland or to see either Prussian or Russian power in central Europe grow. The Polish–Saxon question almost caused a new war among the victors, but defeated France provided a way out. The wily Talleyrand, now representing France at Vienna, suggested the weight of France added to that of Britain and Austria might bring Alexander to his senses. When news of a secret treaty among the three leaked out, the tsar agreed to become ruler of a smaller Poland, and Prussia settled for only part of Saxony. Thereafter, France was included as a fifth great power in all deliberations.

The Hundred Days and the Quadruple Alliance

Napoleon's return from Elba on March 1, 1815, further united the victors. The French army was still loyal to the former emperor, and many of the French people preferred his rule to that of the restored Bourbons. Napoleon escaped to France, and soon regained power. He promised a liberal constitution and a peaceful foreign policy. The allies were not convinced. They declared Napoleon an outlaw (a new device under international law) and sent their armies to crush him. Wellington, with the crucial help of the Prussians under Field Marshal von Blücher (1742–1819), defeated Napoleon at Waterloo in Belgium on June 18, 1815. Napoleon again abdicated and was exiled on Saint Helena, a tiny Atlantic island off the coast of Africa, where he died in 1821.

Read the **Document** "Napoleon's Exile to St. Helena (1815)" on **MyHistoryLab.com**

The Hundred Days, as the period of Napoleon's return is called, frightened the great powers and made the peace settlement harsher for France. In addition to some

In this political cartoon of the Congress of Vienna, Tallyrand simply watches which way the wind is blowing, Castlereagh hesitates, while the monarchs of Russia, Prussia, and Austria form the dance of the Holy Alliance. The king of Saxony holds on to his crown and the republic of Geneva pays homage to the kingdom of Sardinia. bpk, Berlin/Art Resource, NY

Map 19–3 **THE GERMAN STATES AFTER 1815** The German states continued to cooperate in a loose confederation, but maintained their independence. Independence was not restored to the small principalities that had been eliminated during the Napoleonic era.

minor territorial adjustments, the victors imposed a war indemnity and an army of occupation on France. Alexander proposed a Holy Alliance, whereby the monarchs promised to act together in accordance with Christian principles. Austria and Prussia signed, but Castlereagh thought it absurd, and Britain abstained. The tsar, who was then embracing mysticism, believed his proposal a valuable tool for international relations. The Holy Alliance soon became a symbol of extreme political reaction.

Britain, Austria, Prussia, and Russia renewed the Quadruple Alliance on November 20, 1815. Henceforth, it was as much a coalition for maintaining peace as for pursuing victory over France. A coalition for such a purpose had never existed in European diplomacy before. It represented an important new departure in European affairs. Unlike eighteenth-century diplomacy, certain powers were determined to prevent war. The statesmen at Vienna had seen the armies of the French Revolution and Napoleon overturning the political and social order of much of the Continent. Their nations had experienced unprecedented destruction and had had to raise enormous military forces. They knew war affected not just professional armies and navies, but entire civilian populations as well. They were determined to prevent any more such upheaval and destruction.

Consequently, the chief aims of the Congress of Vienna were to prevent a recurrence of the Napoleonic nightmare and to arrange a lasting peace. The leaders of Europe had learned that a treaty should secure not victory, but peace. The diplomats aimed to establish a framework for stability, rather than to punish France. The great powers sought to ensure that each of them would respect the Vienna settlement and not use force to change it.

Though chastened by Prussia's power and its defeat by France, Austria continued to be a powerful player in European diplomacy. Much of the credit for this goes to Metternich, who emerged as the leading statesman of Europe at the Congress of Vienna. Metternich's commitment to preventing international war by preventing domestic revolution enabled him to take the lead in a new system of cooperative conservatism that would become known as the Concert of Europe.

The Congress of Vienna achieved its goals. France accepted the new situation without undue resentment, in part because the new international order recognized it as a great power. The victorious powers settled difficult problems reasonably. They established a new legal framework whereby treaties were made between states rather than between monarchs. The treaties remained in place when a monarch died. Furthermore, during the quarter century of warfare, European leaders had come to calculate the nature of political and economic power in new ways that went beyond the simple vision of gaining a favorable balance of trade that had caused so many eighteenth-century wars. They took into account their natural resources and economies, their systems of education, and the possibility that general growth in agriculture, commerce, and industry would benefit all states and not one at the expense of others.

The Congress has been criticized for failing to recognize and provide for the great forces that would stir the nineteenth century—nationalism and democracy. Such criticism is inappropriate. At the time nationalist pressures were relatively rare; the general desire was for peace. The settlement, like all such agreements, aimed to solve past ills, and in that it succeeded. The statesmen at Vienna could not have anticipated future problems and understandably refused to yield to forces of which they disapproved and that they believed threatened international peace and stability. The measure of the success of the Vienna settlement is that it remained essentially intact for almost half a century and prevented general war for a hundred years. (See Map 19–4.)

Wednesday, April 22

- Read and annotate Part Four, chapters 1 and 2 carefully, paying special attention to the following points:
    - Svidrigailov makes his first appearance at the beginning of this reading. It would be worthwhile to briefly review what we've heard about Svidrigailov earlier in the book (particularly Pulcheria's letter to Raskolnikov in Part One).
    - Svidrigailov asks a question in chapter one that could be considered one of the central questions of the entire book: "[A]m I a monster, or a victim myself?" Consider this question not only as it applies to Svidrigailov but to other characters in the story - are Raskolnikov and Marmeladov monsters, or victims?
    - Questions of religion and spirituality increasingly begin cropping up in Part Four. Start trying to form a picture of the beliefs of the characters. What does Raskolnikov believe about morality, God, and the afterlife? What does Svidrigailov believe? What does Sonya believe?
- Answer the following reading questions in 3-4 complete sentences each.

Crime and Punishment Part Four, chapters 1 and 2

Why has Svidrigailov come to St. Petersburg? What seem to be his plans for the future?

Svidrigailov claims that he and Raskolnikov are “apples from the same tree” (290). Are they? What similarities does Svidrigailov see between himself and Raskolnikov?

What does Luzhin accuse Svidrigailov of in chapter 2? Do you think Luzhin is telling the truth?

Thursday, April 23

- Read the following pages from *Western Heritage* history text (included after reading questions).
- Read Keats "Ode to a Nightingale" (found in history sourcebook)
- Answer the following reading questions in 3-4 complete sentences each.

What were some of the central principles and goals of the Romantic movement?

How does Keats' "Ode to a Nightingale" express some of the themes of Romantic literature? Please cite specific lines or phrases in your answer.

Map 19–4 **EUROPE 1815, AFTER THE CONGRESS OF VIENNA** The Congress of Vienna achieved the post-Napoleonic territorial adjustments shown on the map. The most notable arrangements dealt with areas along France's borders (the Netherlands, Prussia, Switzerland, and Piedmont) and in Poland and northern Italy.

▼ The Romantic Movement

Reflecting on the social, political, and cultural changes within Europe from the mid-eighteenth century to the Congress of Vienna, one German writer asserted in 1818, "in the three generations alive today our own age has combined what cannot be combined. No sense of continuity informs the tremendous contrast inherent in the years 1750, 1789 and 1815."[4] The years of the French Revolution and the conquests of Napoleon saw the emergence of a new and important intellectual movement throughout Europe that has come to be called **Romanticism**. The Romantic movement was a reaction against much of the thought of the Enlightenment and the social transformation of the Industrial Revolution. Not surprisingly, given its emphasis on the individual, scholars have never been able to agree on a general definition of Romanticism. There is, however, a consensus that Romanticism represented a turn toward "absolute inwardness," in the words of Hegel: an emphasis on the artist over his or her work, on the subjective experience and potential heroism of the individual, and the inability to understand the external world through reason. Romantic writers and artists thought the imagination was superior to reason as a means to perceive the world. Instead of controlling nature, they believed, people would be awestruck by it. Many of them urged a revival of Christianity, so that it would once again permeate Europe. Unlike the philosophes, the Romantics liked

[4]Tim Blanning, *The Romantic Revolution: A History* (New York: Modern Library, 2010), p. ix.

NAPOLEONIC EUROPE

1797	Napoleon concludes the Treaty of Campo Formio
1798	Nelson defeats the French navy in the harbor of Abukir in Egypt
1799	Consulate established in France
1801	Concordat between France and the papacy
1802	Treaty of Amiens
1803	War renewed between France and Britain
1804	Execution of Duke d'Enghien
1804	Napoleonic Civil Code issued
1804	Napoleon crowned as emperor
1805 (October 21)	Nelson defeats French and Spanish fleet at Trafalgar
1805 (December 2)	Austerlitz
1806	Jena
1806	Continental System established by Berlin Decrees
1807	Friedland
1807	Treaty of Tilsit; Russia becomes an ally of Napoleon
1808	Beginning of Spanish resistance to Napoleonic domination
1809	Wagram
1809	Napoleon marries Archduchess Marie Louise of Austria
1812	Invasion of Russia and French defeat at Borodino
1813	Leipzig (Battle of the Nations)
1814 (March)	Treaty of Chaumont establishes Quadruple Alliance
1814 (September)	Congress of Vienna convenes
1815 (March 1)	Napoleon returns from Elba
1815 (June 18)	Waterloo
1815 (September 26)	Holy Alliance formed at Congress of Vienna
1815 (November 20)	Quadruple Alliance renewed at Congress of Vienna
1821	Napoleon dies on Saint Helena

the art, literature, and architecture of medieval times. They were also deeply interested in folklore, folk songs, and fairy tales. Dreams, hallucinations, sleepwalking, and other phenomena that suggested the existence of a world beyond that of empirical observation, sensory data, and discursive reasoning fascinated the Romantics. Although their specific interests, tools of expression, and priorities varied, Romantics shared an alienation from what they considered to be the cold rationalism that characterized the industrial economy and Enlightenment thought.

▼ Romantic Questioning of the Supremacy of Reason

The Romantic Movement had roots in the individualism of the Renaissance, Protestant devotion and personal piety, sentimental novels of the eighteenth century, and dramatic German poetry of the ***Sturm und Drang*** (literally, "storm and stress") movement, which rejected the influence of French rationalism on German literature. However, two writers who were also closely related to the Enlightenment provided the immediate intellectual foundations for Romanticism: Jean-Jacques Rousseau and Immanuel Kant raised questions about whether the rationalism so dear to the philosophes was sufficient to explain human nature and be the bedrock principle for organizing human society.

Rousseau and Education

Jean-Jacques Rousseau, though sharing in the reformist spirit of the Enlightenment, opposed many of its other facets (see Chapter 17). Rousseau's conviction that society and material prosperity had corrupted human nature profoundly influenced Romantic writers.

Rousseau set forth his view on how the individual could develop to lead a good and happy life uncorrupted by society in his novel *Émile* (1762). In *Émile*, Rousseau stressed the difference between children and adults. He distinguished the stages of human maturation and urged that children be raised with maximum individual freedom. Each child should be allowed to learn by trial and error what reality is and how best to deal with it. Beyond providing the basic necessities of life and warding off what was manifestly harmful, parents and teachers should stay completely out of the way.

Read the **Document** "Jean-Jacques Rousseau, *Émile*" on **MyHistoryLab.com**

To Romantic writers, this concept of human development vindicated the rights of nature over those of artificial society. They thought such a form of open education would eventually lead to a natural society. In its fully developed form, this view of life led the Romantics to value the uniqueness of each individual and to explore childhood in great detail. The Romantics saw humankind, nature, and society as organically interrelated.

Kant and Reason

Immanuel Kant (1724–1804) wrote the two greatest philosophical works of the late eighteenth century: *The Critique of Pure Reason* (1781) and *The Critique of Practical Reason* (1788). He sought to accept the rationalism of the Enlightenment and to still preserve a belief in human freedom, immortality, and the existence of God. For Kant, the human mind does not simply reflect the

world around it like a passive mirror; rather, the mind actively imposes on the world of sensory experience "forms of sensibility" and "categories of understanding." The mind itself generates these categories. This meant that human perceptions are as much the product of the mind's own activity as of sensory experience.

Kant found the sphere of reality that was accessible to pure reason to be limited. He believed, however, that beyond the phenomenal world of sensory experience, over which "pure reason" was master, there existed what he called the "noumenal" world. This world is a sphere of moral and aesthetic reality known by "practical reason" and conscience. Kant thought all human beings possess an innate sense of moral duty or an awareness of what he called a **categorical imperative**. This term refers to an inner command to act in every situation as one would have all other people always act in the same situation. On the basis of humankind's moral sense, Kant postulated the existence of God, eternal life, and future rewards and punishments. He believed that reason alone could not prove these transcendental truths. Still, he was convinced they were realities to which every reasonable person could attest.

To many Romantic writers, Kantian philosophy refuted the narrow rationality of the Enlightenment. Whether they called it "practical reason," "fancy," "imagination," "intuition," or simply "feeling," the Romantics believed that the human mind had the power to penetrate beyond the limits of largely passive human understanding.

▼ Romantic Literature

The term *Romantic* appeared in English and French literature as early as the seventeenth century. Neoclassical writers then used the word to describe literature they considered unreal, sentimental, or excessively fanciful. Later, in both England and Germany, the term came to be applied to all literature that did not observe classical forms and rules and gave free play to the imagination. The Romantic Movement had peaked in Germany and England before it became a major force in France under the leadership of Madame de Staël (1766–1817) and Victor Hugo (1802–1885). (See the Document "Madame de Staël Describes the New Romantic Literature of Germany," page 605.) The first French writer to declare himself a Romantic was Henri Beyle (1783–1842), who wrote under the pseudonym Stendhal.

English Romantic Writers

The English Romantics believed poetry was enhanced by freely following the creative impulses of the mind. For Samuel Taylor Coleridge (1772–1834), the artist's imagination was God at work in the mind. Poetry thus could not be considered idle play. Rather, it was the highest of human acts, humankind's self-fulfillment in a transcendental world.

Coleridge was the master of Gothic poems of the supernatural, such as "The Rime of the Ancient Mariner," which relates the story of a sailor cursed for killing an albatross. The poem treats the subject as a crime against nature and God and raises the issues of guilt, punishment, and the redemptive possibilities of humility and penance. At the end of the poem, the mariner discovers the unity and beauty of all things. Having repented, he is delivered from his awful curse, which has been symbolized by the dead albatross hung around his neck:

O happy living things! no tongue
Their beauty might declare:
A spring of love gushed from my heart,
And I blessed them unaware . . .
The self-same moment I could pray;
And from my neck so free
The Albatross fell off, and sank
Like lead into the sea.

Wordsworth William Wordsworth (1770–1850) was Coleridge's closest friend. Together they published *Lyrical Ballads* in 1798 as a manifesto of a new poetry that rejected the rules of eighteenth-century criticism. Among Wordsworth's most important later poems is his "Ode on Intimations of Immortality" (1803). Its subject is the loss of poetic vision, something Wordsworth felt then in himself. Nature, which he had worshipped, no longer spoke freely to him, and he feared it might never speak to him again:

There was a time when meadow, grove, and stream,
The earth, and every common sight,
To me did seem
Appareled in celestial light,
The glory and the freshness of a dream.
It is not now as it hath been of yore—
Turn whereso'er I may,
By night or day,
The things which I have seen I now can
see no more.

He mourned the loss of his childlike vision and closeness to spiritual reality—a loss he believed was part of the necessary process of maturation. For Wordsworth and Coleridge, childhood was the bright period of creative imagination. Aging and urban living corrupt and deaden the imagination, making inner feelings and the beauty of nature less important.

Lord Byron A true rebel among the Romantic poets was Lord Byron (1788–1824). In Britain, even most of the other Romantic writers distrusted and disliked him. Outside England, however, Byron was regarded as the embodiment of the new person the French Revolution had created. He rejected old traditions (he was divorced

Document

MADAME DE STAËL DESCRIBES THE NEW ROMANTIC LITERATURE OF GERMANY

Anne-Louise-Germaine de Staël, known generally as Madame de Staël, was the daughter of Jacques Necker, the finance minister of Louis XVI. She was also the friend of major French political liberals and a critic of Napoleonic absolutism. More importantly for European literary life, Madame de Staël visited Germany, read the emerging German Romantic literature, and introduced it to both French- and English-speaking Europe in her book Concerning Germany *(1813). In the passage that follows, she endorses the new German literature. She points to the novelty of this Romantic poetry and then relates it to a new appreciation of Christianity and the Middle Ages. She praises the medieval troubadours, composers, and performers of lyric poetry in song.*

How does de Staël characterize the new Romantic school of poetry? How does she contrast it with the literature that had its roots in ancient Greece and Rome? What is the relationship of the Middle Ages to the new poetry and other examples of the fine arts touched by Romantic sensibilities?

The word *romantic* has been lately introduced in Germany, to designate that kind of poetry which is derived from the songs of the Troubadours; that which owes its birth to the union of chivalry and Christianity. If we do not admit that the empire of literature has been divided between paganism and Christianity, the north and the south, antiquity and the middle ages, chivalry and the institutions of Greece and Rome, we shall never succeed in forming a philosophical judgment of ancient and of modern taste.

Some French critics have asserted that German literature is still in its infancy; this opinion is entirely false: men who are best skilled in the knowledge of languages, and the works of the ancients, are certainly not ignorant of the defects and advantages attached to the species of literature which they either adopt or reject; but their character, their habits, and their modes of reasoning, have led them to prefer that which is founded on the recollection of chivalry, on the wonders of the middle ages, to that which has for its basis the mythology of the Greeks. The literature of romance is alone capable of further improvement, because, being rooted in our own soil, that alone can continue to grow and acquire fresh life: it expresses our religion; it recalls our history; its origin is ancient, although not of classical antiquity. Classic poetry, before it comes home to us, must pass through our recollections of paganism; that of the Germans is the Christian era of the fine arts; it employs our personal impressions to excite strong and vivid emotions; the genius by which it is inspired addresses itself immediately to our hearts; of all phantoms at once the most powerful and the most terrible. . . .

The new school maintains the same system in the fine arts as in literature, and affirms that Christianity is the source of all modern genius; the writers of this school also characterize, in a new manner, all that in Gothic architecture agrees with the religious sentiments of Christians. . . . It is only of consequence to us, in the present silence of genius, to lay aside the contempt which has been thrown on all the conceptions of the middle ages.

From Madame de Staël, *Concerning Germany* (London: John Murray, 1814) as quoted in Howard E. Hugo, ed., *The Romantic Reader* (New York: Viking, 1957), pp. 64–66.

and famous for his many love affairs) and championed the cause of personal liberty. Byron was outrageously skeptical and mocking, even of his own beliefs. In *Childe Harold's Pilgrimage* (1812), he created a brooding, melancholy Romantic hero. In *Don Juan* (1819), he wrote with ribald humor, acknowledged nature's cruelty as well as its beauty, and even expressed admiration for urban life.

Mary Godwin Shelley Mary Godwin (1797–1851) was the daughter of Mary Wollstonecraft, author of *A Vindication of the Rights of Woman*. Wollstonecraft died

of puerperal fever shortly after Godwin's birth. At the age of 16, Godwin fell in love with Romantic poet Percy Bysshe Shelley, who was already married. Fleeing ostracism and scandal in England, they traveled through Europe, and married after the suicide of Shelley's first wife. While spending the summer of 1816 on Lake Geneva with their mutual friend, Lord Byron, Godwin conceived of the idea behind *Frankenstein: or, The Modern Prometheus*, which she published in 1818. Often considered the first science fiction novel, it tells the story of a Swiss doctor, Frankenstein, who deliberately creates a living being out of components of dead bodies. Frankenstein finds he has created not a beautiful creature, but instead an abhorrent "monster." When Godwin, by then Mary Shelley, was revealed as the author, contemporary critics complained that the gruesome subject matter was inappropriate for a young female mind.

The German Romantic Writers

Almost all major German Romantics wrote at least one novel. Romantic novels often were highly sentimental and borrowed material from medieval romances. The characters of Romantic novels were treated as symbols of the larger truth of life. Purely realistic description was avoided. Friedrich Schlegel (1767–1845) wrote the progressive early Romantic novel *Lucinde* (1799) that attacked prejudices against women as capable of being little more than lovers and domestics. Schlegel's novel reveals the ability of the Romantics to become involved in the social issues of their day. He depicted Lucinde as the perfect friend and companion, as well as the unsurpassed lover, of the hero. The work shocked contemporary morals by frankly discussing sexual activity and by describing Lucinde as equal to the male hero.

George Gordon, Lord Byron (1788–1824), chose Albanian attire for this portrait. A famous supporter of the Greek Revolution, which would cost him his life (he died of fever in Greece in 1824), Byron proudly suggested he was capable of embodying many different personalities and participating in different cultural traditions. In England, his personal life was considered scandalous. The Granger Collection, New York

Goethe Perhaps the greatest German writer of modern times, Johann Wolfgang von Goethe (1749–1832) defies easy classification. Part of his literary production fits into the Romantic mold, and part of it was a condemnation of Romantic excesses. The book that made his early reputation was *The Sorrows of Young Werther*, published in 1774. This novel, like many in the eighteenth century, is a series of letters. The hero falls in love with Lotte, who is married to another man. Eventually Werther and Lotte part, but in his grief, Werther takes his own life. This novel became popular throughout Europe. Romantic authors admired its emphasis on feeling and on living outside the bounds of polite society.

Read the Document "Johann Wolfgang von Goethe, *Prometheus*, 1773" on **MyHistoryLab.com**

Goethe's masterpiece was *Faust*, a long dramatic poem. Part I, published in 1808, tells the story of Faust, who makes a pact with the devil—he will exchange his soul for greater knowledge than other human beings possess. As the story progresses, Faust seduces a young woman named Gretchen. She dies but is received into heaven as the grief-stricken Faust realizes he must continue to live. At the conclusion of Part II, completed in 1832, Faust dedicates his life, or what remains of it, to the improvement of humankind. He feels this goal will allow him to overcome the restless striving that induced him to make the pact with the devil. That new knowledge breaks the pact. Faust dies and is received by angels.

Friday, April 24

- Read and annotate Part Four, chapter 3 carefully and thoroughly.
- Answer the following reading questions in 3-4 complete sentences each.

What do we learn of Luzhin's interior character from his reaction to the meeting?

What happens between Raskolnikov and Razumikhin at the end of the chapter? What is the “hint of some idea” that “seemed to pass between them”? (314)

GreatHearts Irving

Remote Learning Packet

NB: Please keep all work produced this week. Details regarding how to turn in this work will be forthcoming.

April 20-24, 2020

Course: 10 Latin IV

Teacher(s): Ms. Mueller mariel.mueller@greatheartsirving.org

Supplemental Links: Aeneid I.81-101 Online Grammar Reference
Aeneid Online Vocabulary Reference

Weekly Plan:

Monday, April 20

☐ Check last week's scansion and translation assignments against the keys provided and make corrections

☐ Check parts I-III of "*Aeneid* I.34-80 Practice Test" against the key provided and make corrections

☐ Review the grading rubric and sample essay and write a second draft of your essay in section IV

Tuesday, April 21

☐ Read lines *Aeneid* I. 81-91 (pp. 17 and 18)

☐ Complete "*Aeneid* I.81-91 Reading and Grammar Questions" worksheet

Wednesday, April 22

☐ Check subject, verb and modifiers key for *Aeneid* I.81-91 and mark your text accordingly

☐ Translate *Aeneid* I. 81-91 into English

Thursday, April 23

☐ Read lines *Aeneid* I. 92-101 (pp. 18 and 19)

☐ Complete "*Aeneid* I.92-101 Reading and Grammar Questions" worksheet

Friday, April 24

☐ Check subject, verb and modifiers key for *Aeneid* I.92-101 and mark your text accordingly

☐ Translate *Aeneid* I. 92-101 into English

Statement of Academic Honesty

I affirm that the work completed from the packet is mine and that I completed it independently.

I affirm that, to the best of my knowledge, my child completed this work independently

_____
Student Signature

_____
Parent Signature

Monday, April 20

1. Check last week's scansion and translation assignments (*Aeneid* I.76-80 and "Even More Scansion Practice") against the keys provided and make any necessary corrections.

2. Check your answers from last week's "*Aeneid* I.34-80 Practice Test" against the answer key provided and make any necessary corrections on parts I-III in a red pen.

3. For section IV, review the grading rubric and sample essay and write a second draft of your original essay to improve its quality. Please note that the sample essay was written for a different prompt and is meant to give you a more concrete idea of the quality indicated on the rubric.

N.B. It is likely that we will have an assessment over this unit in conjunction with the next unit, so it is important that you hang on to this test for future review.

Tuesday, April 21

1. Read lines 81-91of *Aeneid* book I (pp. 17 and 18). Again, as your first encounter with the passage, you should only read for a basic understanding. Avoid the temptation to look up words in the dictionary the first time through, and read the passage aloud to help with your understanding.

2. Complete the "*Aeneid* I.81-91 Reading and Grammar Questions" worksheet attached. If a printed copy of the worksheet is not available to you, you may write out the answers on a separate piece of notebook paper. Please be sure to use a full heading and include the title "*Aeneid* I.81-91 Reading and Grammar Questions."

Wednesday, April 22

1. Check the subject, verb and modifiers key attached for *Aeneid* I.81-91 and mark your text accordingly. This week, I am not asking you to identify these things for yourself first, though you can if you would like to.

2. Translate *Aeneid* I. 81-91 into English making sure your translation accurately represents the subjects, verbs, and modifiers identified in number 1. You may translate these lines on the translation page provided or on a separate piece of notebook paper titled "*Aeneid* I. 81-91 Translation."

Thursday, April 23

1. Read lines 92-101of *Aeneid* book I (pp. 18 and 19) for a basic understanding. Again, avoid the temptation to look up words in the dictionary the first time through, and read the passage aloud to help with your understanding.

2. Complete the "*Aeneid* I.92-101 Reading and Grammar Questions" worksheet attached. If a printed copy of the worksheet is not available to you, you may write out the answers on a separate

piece of notebook paper. Please be sure to use a full heading and include the title "*Aeneid* I.92-101 Reading and Grammar Questions."

Friday, April 24

1. Check the subject, verb and modifiers key attached for *Aeneid* I. 92-101 and mark your text accordingly. Again, I am not asking you to identify these things for yourself first, though you can if you would like to.

2. Translate *Aeneid* I. 92-101 into English making sure your translation accurately represents the subjects, verbs, and modifiers identified in number 1. You may translate these lines on the translation page provided or on a separate piece of notebook paper titled "*Aeneid* I. 92-101 Translation."

_____KEY_____
_____
_____
_____

Even More Scansion Practice

*Scan the following lines (*Aeneid *I.76-80) written in Dactylic Hexameter. If needed, refer to the "Part Three: Metrics" pages from the 1st week's packet.*

Aeolus | haec con | trā: "Tuus, | Ō rē | gīna, quid | optēs
65 explō | rāre la | bor; mihi | iussa ca | pessere | fās est.
Tū mihi, | quodcum | qu(e) hoc rēg | nī, tū | scēptra Io | vemque
concili | ās, tū | dās epu | līs ac | cumbere | dīvum,
nimbō | rumque fa | cis tem | pestā | tumque po | tentem."

Remember that the letter *i* is a consonant when it makes the sound "yuh" as in *iussa* in line 65 and *Iovemque* in line 66. This means there is no elision between *mihi* and *iussa* in line 65 and no elision between *scetpra* and *Iovemque* in line 66.

_____KEY_____
_____
_____
_____

***Aeneid* I.34-80 Practice Test**

I. Circle the letter that best answers the questions based on the passage below:

illī indignantēs magnō cum murmure montis
circum claustra fremunt; celsā sedet Aeolus arce
scēptra tenēns, mollitque animōs et temperat īrās.
nī faciat, maria ac terrās caelumque profundum
quippe ferant rapidī sēcum verrantque per aurās.
sed pater omnipotēns spēluncīs abdidit ātrīs,
hoc metuēns, mōlemque et montēs īnsuper altōs
imposuit, rēgemque dedit, quī foedere certō
et premere et laxās scīret dare iussus habēnās.
ad quem tum Iūnō supplex hīs vōcibus ūsa est:
"Aeole, namque tibī dīvum pater atque hominum rēx
et mulcēre dedit flūctūs et tollere ventō,
gēns inimīca mihī Tyrrhēnum nāvigat aequor,
Īlium in Ītaliam portāns victōsque Penātēs:
incute vim ventīs submersāsque obrue puppēs,
aut age dīversōs et disice corpora pontō.
sunt mihi bis septem praestantī corpore nymphae,
quārum quae fōrmā pulcherrima Dēiopēa,
cōnūbiō iungam stabilī propriamque dicābō,
omnēs ut tēcum meritīs prō tālibus annōs
exigat et pulchrā faciat tē prōle parentem."

1. In line 59, *-que* connects
   a. *secum* and *verrant* (line 59)
   c. *ferant* and *verrant* (line 59)
   b. *verrant* and *per* (line 59)
   d. *secum* and *auras* (line 59)

2. In line 59, *secum* is translated
   a. to himself
   c. with him
   b. to herself
   d. with them

3. The antecedent of *qui* (line 62) is
   a. *regem* (line 62)
   c. *montes* (line 61)
   b. *foedere* (line 62)
   d. *iussus* (line 63)

4. The phrase *divum . . . rex* (line 65) refers to
   a. Aiax
   c. Priamus
   b. Aeneas
   d. Jupiter

5. The case and number of *fluctus* (line 66) is
   a. nominative singular
   c. accusative plural
   b. nominative plural
   d. genitive singular

6. In line 67, the phrase *gens inimica mihi* describes
   a. Trojans
   c. Greeks
   b. Nymphae
   d. Danai

7. From line 68, we learn that
   a. Penates is bringing Ilium into Italy
   c. the remnants of the Trojan state and its religion are being brought to Italy
   b. Ilium conquered the Penates as they were being carried to Italy
   d. the defeated Trojans are carrying the Penates into Ilium

8. In line 70, *dissice* is
   a. present infinitive
   c. accusative singular
   b. present imperative
   d. ablative singular

9. Why is Deiopea an especially valuable bribe?
   a. she is the most beautiful
   c. she has beautiful offspring
   b. she is fourteen years old
   d. she has performed many duties for Juno

10. The form *iungam* (line 73) is a(n)
   a. perfect participle
   c. present subjunctive
   b. accusative singular
   d. future indicative

II. Translate the following passage into English:

ipsa Iovis rapidum iaculāta ē nūbibus ignem
disiēcitque ratēs ēvertitque aequora ventīs,
illum exspīrantem trānsfīxō pectore flammās
turbīne corripuit scopulōque infīxit acūtō;
ast ego, quae dīvum incēdō rēgīna Iovisque
et soror et coniunx, ūnā cum gente tot annōs
bella gerō.

She herself having hurled the swift fire of Jupiter from the clouds
both scattered the ships and overturned the sea with the winds,
and him/that one breathing out flames from his pierced chest,
she snatched up in a whirlwind and impaled him on a sharp rock;
But I, who proceed as queen of the gods and both sister and
wife of Jupiter, have been waging war with one race for so many years.

III. Scan the following lines:

sed pater | omnipo | tēns spē | luncīs | abdidit | ātrīs,

hoc metu | ēns, mō | lemqu(e) et | montēs | īnsuper | altos

imposu | it, rē | gemque de | dit, quī | foedere | certō

et preme | r(e) et la | xās scī | ret dare | iussus ha | bēnās.

IV. Paragraph Response:

"Aeole, namque tibī dīvum pater atque hominum rēx
et mulcēre dedit flūctūs et tollere ventō,
gēns inimīca mihī Tyrrhēnum nāvigat aequor,
Īlium in Ītaliam portāns victōsque Penātēs:
incute vim ventīs submersāsque obrue puppēs,
aut age dīversōs et disice corpora pontō.
sunt mihi bis septem praestantī corpore nymphae,
quārum quae fōrmā pulcherrima Dēiopēa,
cōnūbiō iungam stabilī propriamque dicābō,
omnēs ut tēcum meritīs prō tālibus annōs
exigat et pulchrā faciat tē prōle parentem."

In the passage above, we see Juno make a rhetorical appeal to Aeolus to solicit his help. In a well-developed paragraph **discuss the elements of Juno's appeal to Aeolus and what these elements reveal about how she perceives Aeolus.** Be sure to begin your paragraph with a clear topic sentence/ thesis statement and refer specifically to the Latin throughout the passage to support the points you make in your essay.

(When you are asked to refer specifically to the Latin, you must write out the Latin and/or cite line numbers AND you must translate, accurately paraphrase, or make clear in your discussion that you understand the Latin.)

Aeneid I.34-80 Practice Test Essay Rubric

	Development of Argument/Analysis	**Use of Latin**	**Inferences & Conclusions**	**Contextual Knowledge**
20 pts **Strong**	The student develops a strong essay and consistently aligns it to Latin discussing the elements of Juno's appeal to Aeolus and what these elements reveal about how she perceives Aeolus evidence. Occasional errors need not weaken the overall impression of the essay.	The student uses copious examples of accurate, specific, and relevant Latin, properly cited, drawn from throughout the passage.	The student consistently uses inferences and draws conclusions that accurately reflect the Latin and support the analysis.	The student is able to use specific contextual references consistently in order to support the analysis.
16 pts **Good**	The student develops a good essay discussing the elements of Juno's appeal to Aeolus and what these elements reveal about how she perceives Aeolus, providing main ideas and some supporting details. Although the analysis may not be nuanced, it is based on a sound understanding of the Latin.	The student uses examples of Latin that are generally accurate, specific, and relevant, properly cited; while they are not plentiful, they are drawn from throughout the passage.	The student uses some inferences and draws some conclusions that accurately reflect the Latin and support the analysis. The student may rely on what is stated or may make inaccurate inferences.	The student is able to use some specific contextual references that support the analysis.
12 pts **Average**	The student develops an adequate essay discussing the elements of Juno's appeal to Aeolus and what these elements reveal about how she perceives Aeolus that reflects understanding of the passages. The analysis may not be well developed, relying on main ideas but few supporting details, or it may rely on summary more than analysis.	The student may have few accurate Latin citations; they may not be linked to the analysis or fail to support it.	The student may display only limited understanding of implied information.	The student may sometimes misunderstand contextual references or fail to connect them effectively to the analysis.
8 pts **Weak**	The student recognizes the passages but presents only a weak essay. It may be confusing and lack organization or may rely on summary, and it addresses only portions of the passage.	The student provides little Latin support, taken out of context or misunderstood; or may use no Latin.	The student may make incorrect assumptions or make inferences and conclusions based on the passage only rarely.	The student may show no understanding or a thorough misunderstanding of context; references to context, if any, are irrelevant.
4 pts **Poor**	The student understands the question but offers no meaningful analysis. Although the student may not recognize the passage, the response contains some correct, relevant information.	The student cites no Latin, or only individual Latin words, and exhibits either no understanding of the Latin in context, or a complete misunderstanding.	The student does not make inferences and conclusions based on the passage.	The student shows no understanding or thorough misunderstanding of context and provides no meaningful discussion of context or contextual references.
0 pts **Unacceptable**	The student offers a response that is totally irrelevant, totally incorrect, or restates the question.	The student demonstrates no understanding of Latin in context.	The student does not make inferences and conclusions based on the passage.	The student shows no understanding or a thorough misunderstanding of context and provides no meaningful discussion of context or contextual references

The following is a sample of an actual student response that received full marks on a similar rubric. The essay prompt this student was addressing is below. Since you do not have reference to the Latin of this passage, it is good to note that the student's translations of the Latin he/she was referencing were about 90% accurate:

In the passage above, Priam confronts Pyrrhus. In a short essay, **discuss what the passage reveals about both Priam and Pyrrhus**. Refer specifically to the Latin throughout the passage to support the points you make in your essay.

Student Response:

"In the passage, Priam is confronting Pyrrhus with his last breath as the young warrior is about to kill him. He had just witnessed the murder of his son Polites before the altar. The passage creates a stark contrast between the noble character of Priam and the wickedness of Pyrrhus.

The reader is told that Priam is near death. Yet, instead of begging for mercy from Pyrrhus, he is saying things that anger his conqueror even more. Priam is unafraid. Vergil writes, 'Priam, although he is held in the middle of death, nevertheless he does not restrain himself nor refrain from voices and angers' (*Priamus . . . pepercit* lines 1-2). He is old and frail, but he still does what is right. He wears his armor and tries to save the dignity of his son even though he knows that it's no use. He is much weaker due to his age. After his speech to Pyrrhus, 'the old man hurls the useless spear without a blow' (*senior . . . coniecit* lines 12-13). He is not only described as old, but his weapon is useless and his throw is weak. The preceding passage, where Hecuba speaks to Priam, puts him in much the same light. Priam's bravery does not come from false belief in his strength, but from the duty he feels to his family and especially to his son, who has just been killed. His weakness only serves to emphasize how difficult it must be for Priam and how noble he is to risk a death with more suffering.

Pyrrhus, on the other hand, provides sharp contrast. He does not feel the type of duty to family that Priam does. Priam, when speaking to Pyrrhus, tells him 'that Achilles, from whom you lie that you are begotten, was not such to his enemy Priam' (*Non . . . Priamo* lines 8-9). We also learn from Priam's speech when he said, 'You who made me see openly the death of my son and defile the paternal face with death' (*fecisti . . . vultus* lines 6-7). From these two clues, we see that Pyrrhus has killed Polites before Priam's eyes and had not respected the dignity of his father. Although Achilles 'blushed at the laws and faith of the suppliant and returned the lifeless Hectorean body for a tomb and sent me back into my kingdom' (*iura . . . remisit* lines 9-11). Pyrrhus clearly does not have the compassion of his father, and does not understand duty to family and love for family. Although they are in the middle of war, this passage illustrates that he is a warrior not merely motivated by winning the war, but inflicting cruelty. He has no cares about defiling his father's image with his actions or making a father watch his own son die."

_____
_____
_____
_____

***Aeneid* I.81-91 Reading and Grammar Questions**

I. Comprehension Questions: Answer the following questions from lines 81-91.

1. In the simile in line 82, to what are the rushing winds compared?

   _____
   _____
   _____

2. Which winds are named specifically in lines 85 and 86 and how is the *Africus* (southwest wind) described?

   _____
   _____
   _____

3. What affect do these winds have on the water in line 86?

   _____
   _____
   _____

4. In line 87, what are we told follows this?

   _____
   _____
   _____

5. Give two details describing the weather conditions the Trojans are experiencing in lines 89-90.

   _____
   _____
   _____

6. What threat do these conditions hold for the Trojans (line 91)?

   _____
   _____
   _____

II. Grammar Questions: Indicate True or False by marking a "T" or an "F" in the space provided.

1. ____ In line 81, *conversa* modifies *cuspide*.
2. ____ The implied subject of *impulit* (line 82) is Juno.
3. ____ In line 84, *incubere* is an infinitive.
4. ____ *ruunt* (line 85) has three subjects.
5. ____ *rudentum* modifies *virum* in line 87.
6. ____ *poli* (line 90) is the subject of *intonuere*.

III. Scansion: Scan the following lines of dactylic hexameter.

Haec ubi dicta, cavum conversā cuspide montem

impulit in latus; ac ventī velut agmine factō,

quā data porta, ruunt et terrās turbine perflant.

Haec ubi dicta, cavum conversā cuspide montem
impulit in latus: ac ventī velut agmine factō,
quā data porta, ruunt et terrās turbine perflant.
Incubuēre marī tōtumque ā sēdibus īmīs
ūnā Eurusque Notusque ruunt crēberque procellīs
Āfricus et vastōs volvunt ad lītora flūctūs:
īnsequitur clāmorque virum strīdorque rudentum.
Ēripiunt subitō nūbēs caelumque diemque
Teucōrum ex oculīs; pontō nox incubat ātra.
Īntonuēre polī et crēbrīs micat ignibus aethēr
praesentemque virīs intentant omnia mortem.
Extemplō Aenēae solvuntur frīgore membra;
Ingemit et duplicēs tendēns ad sīdera palmās
tālia vōce refert: "Ō terque quarterque beātī,
quīs ante ōra patrum Troiae sub moenibus altīs
contigit oppetere! Ō Danaum fortissime gentis
Tȳdīdē! mēne Īliacīs occumbere campīs
nōn potuisse tuāque animam hanc effundere dextrā
saevus ubi Aeacidae tēlō iacet Hector, ubi ingēns
Sarpēdon, ubi tot Simoīs correpta sub undīs

scūta virum galeāsque et fortia corpora volvit!”

Tālia iactantī strīdēns Aquilōne procella

vēlum adversa ferit, flūctūsque ad sīdera tollit.

Franguntur rēmī, tum prōra āvertit et undīs

dat latus, īnsequitur cumulō praeruptus aquae mōns

Hī summō in flūctū pendent; hīs unda dehīscēns

terram inter flūctūs aperit, furit aestus harēnis.

Trēs Notus abreptās in saxa latentia torquet

(saxa vocant Italī mediīs quae in flūctibus Ārās,

dorsum immāne marī summō), trēs Eurus ab altō

in brevia et syrtēs urget, miserābile vīsū,

inlīditque vadīs atque aggere cingit harēnae.

Ūnam, quae Lyciōs fīdumque vehēbat Orontēn,

ipsius ante oculōs ingēns ā vertice pontus

in puppim ferit: excutitur prōnusque magister

volvitur in caput; ast illam ter flūctus ibīdem

torquet agēns circum et rapidus vorat aequore vertex.

Appārent rārī nantēs in gurgite vastō,

arma virum tabulaeque et Trōia gaza per undās.

Iam validam Īlioneī nāvem, iam fortis Achātae,

Haec ubi dicta, cavum conversā cuspide montem
impulit in latus: ac ventī velut agmine factō,
quā data porta, ruunt et terrās turbine perflant.
Incubuēre marī tōtumque ā sēdibus īmīs
ūnā Eurusque Notusque ruunt crēberque procellīs
Āfricus et vastōs volvunt ad lītora flūctūs:
īnsequitur clāmorque virum strīdorque rudentum.
Ēripiunt subitō nūbēs caelumque diemque
Teucōrum ex oculīs; pontō nox incubat ātra.
Īntonuēre polī et crēbrīs micat ignibus aethēr
praesentemque virīs intentant omnia mortem.
Extemplō Aenēae solvuntur frīgore membra;
Ingemit et duplicēs tendēns ad sīdera palmās
tālia vōce refert: "Ō terque quarterque beātī,
quīs ante ōra patrum Troiae sub moenibus altīs
contigit oppetere! Ō Danaum fortissime gentis
Tȳdīdē! mēne Īliacīs occumbere campīs
nōn potuisse tuāque animam hanc effundere dextrā
saevus ubi Aeacidae tēlō iacet Hector, ubi ingēns
Sarpēdon, ubi tot Simoīs correpta sub undīs

scūta virum galeāsque et fortia corpora volvit!”

Tālia iactantī strīdēns Aquilōne procella

vēlum adversa ferit, flūctūsque ad sīdera tollit.

Franguntur rēmī, tum prōra āvertit et undīs

dat latus, īnsequitur cumulō praeruptus aquae mōns

Hī summō in flūctū pendent; hīs unda dehīscēns

terram inter flūctūs aperit, furit aestus harēnis.

Trēs Notus abreptās in saxa latentia torquet

(saxa vocant Italī mediīs quae in flūctibus Ārās,

dorsum immāne marī summō), trēs Eurus ab altō

in brevia et syrtēs urget, miserābile vīsū,

inlīditque vadīs atque aggere cingit harēnae.

Ūnam, quae Lyciōs fīdumque vehēbat Orontēn,

ipsius ante oculōs ingēns ā vertice pontus

in puppim ferit: excutitur prōnusque magister

volvitur in caput; ast illam ter flūctus ibīdem

torquet agēns circum et rapidus vorat aequore vertex.

Appārent rārī nantēs in gurgite vastō,

arma virum tabulaeque et Trōia gaza per undās.

Iam validam Īlioneī nāvem, iam fortis Achātae,

_____
_____
_____
_____

Aeneid I.92-101 Reading and Grammar Questions

I. Comprehension Questions: Answer the following questions from lines 81-91.

1. Name three things that Aeneas does in lines 92-94.

   _____
   _____
   _____

2. Whom does Aeneas consider blessed (lines 94-96)?

   _____
   _____
   _____

3. In line 97, Vergil uses a patronymic ("son of . . .") to refer to an important character, Tydides (lit., "son of Tydeus"). Tydides is the patronymic for whom? Why would Aeneas mention him here?

   _____
   _____
   _____

4. For whom is Aeacides the patronymic?

   _____

5. Whom did Aeacides kill and with what weapon did he kill him?

   _____
   _____
   _____

6. Name three things that Aeneas says are churned under the waves of the Simois river.

   _____
   _____
   _____

II. Grammar Questions: Indicate True or False by marking a "T" or an "F" in the space provided.

1. ____ In line 92, *extemplo* is dative.
2. ____ *talia* (line 94) modifies *sidera* (line 93).
3. ____ Aeneas is the subject of *ingemit* (line 93) and *refert* (line 94).
4. ____ In line 95, *patrum* is genitive.
5. ____ *Iliacis* modifies *campis* in line 97.
6. ____ *occumbere* and *effundere* are complementary infinitives with *potuisse*.

III. Scansion: Scan the following lines of dactylic hexameter.

saevus ubi Aeacidae tēlō iacet Hector, ubi ingēns

Sarpēdon, ubi tot Simoīs correpta sub undīs

scūta virum galeāsque in fortis corpora volvit!

GreatHearts Irving

Remote Learning Packet

NB: Please keep all work produced this week. Details regarding how to turn in this work will be forthcoming.

April 20 - 24, 2020

Course: 10 Precalculus

Teacher(s): Mr. Simmons

Weekly Plan:

Monday, April 20

☐ Check the "Radians" handout answer key

☐ Begin the "More on Angles" handout

Tuesday, April 21

☐ Complete the "More on Angles" handout

Wednesday, April 22

☐ Check the "More on Angles" handout answer key

☐ Complete problem set 5.1: 7-39 odd

Thursday, April 23

☐ Check answers to problems set 5.1: 7-39 odd

☐ Complete problem set 5.1: 41-57 odd

Friday, April 24

☐ Check answers to problem set 5.1: 41-57 odd

Statement of Academic Honesty

I affirm that the work completed from the packet is mine and that I completed it independently.

I affirm that, to the best of my knowledge, my child completed this work independently

_____

Student Signature

_____

Parent Signature

Monday, April 20

1. Check your answer in the “Radians” handout against my answer key.
2. Begin the “More on Angles” handout.

Tuesday, April 21

1. Complete the “More on Angles” handout.

Wednesday, April 22

1. Check your answers to the “More on Angles” handout against my answer key.
2. Complete problem set 5.1: 7-39 odd.

Thursday, April 23

1. Check answers to problems set 5.1: 7-39 odd in the back of the book.
2. Complete problem set 5.1: 41-57 odd.

Friday, April 24

1. Check answers to problem set 5.1: 41-57 odd in the back of the book

Radians – Answer Key

Precalculus
Mr. Simmons

Read through this handout carefully and pause to think and respond when instructed.

We got the unit called degrees (°) by dividing a full rotation into 360 equally sized angles and saying that each of those angles had measure 1°. Note that the number 360 was an arbitrary choice: we could have chosen 4, or 10, or any other counting number. But 360 is useful, because it is divisible by so many numbers (i.e., by 1, 2, 3, 4, 5, 6, 8, 9, 10, 12, 15, 18, 20, 24, 30, 36, 40, 45, 60, 72, 90, 120, 180, and 360 itself). Fun fact: 360 is therefore called a "highly composite" number. So are 12 and 60, which is why there are 12 inches in a foot and 60 minutes in an hour (and 60 seconds in a minute).[1]

But is there a less arbitrary way to measure an angle? When we look at an angle and wonder how big it is, we generally wonder, in an intuitive sense, how "far apart" the two rays are. A bigger angle will mean two rays that are "further apart." But, of course, the distance between the two rays is ... zero. Always. Because they're touching (at the vertex).

So what do we do? Last handout, we pictured the standard position right angle as the swinging open of a door whose hinge is at the origin and whose knob swings from $(1, 0)$ to $(0, 1)$. This dynamic representation of an angle allows us to measure the angle not by asking how "far apart" the rays are (because that number will always be zero), but by asking how far the knob has swung. So let's trace the path of the knob.

In the space below (or, if you haven't been able to print out this document, then on a separate sheet of paper), sketch the aforementioned standard position right angle, the one represented by the door swinging open, with its vertex at the origin and rays that pass through the points $(1, 0)$ and $(0, 1)$:

Now put your pencil down at $(1, 0)$ and start drawing the unit circle counterclockwise, but stop once you get to $(0, 1)$. If we think of this angle as representing the opening of the door, then what you just traced is the path of motion of the doorknob.

[1] Just for fun, consider the pros and cons of the metric system of units versus the imperial system of units. Sure, the metric system simplifies everything to base 10, but there are good reasons to use highly composite numbers like 8, 12, and 36.

What you just drew is called an **arc**. An arc may be a portion of a full circle, a full circle, or even more than a full circle. The length of the arc around an entire circle is called the **circumference** of that circle. The arc you just drew is just a portion of the unit circle (one fourth, to be specific), and it has two **endpoints**: $(1, 0)$ and $(0, 1)$.

We say that the arc you just drew **subtends** our right angle, because the angle's rays go through the arc's endpoints, and the angle's vertex is the arc's circle's center (in this case, the origin). We said earlier that measuring the path of the knob, that is, measuring this arc, would help us measure the angle. Well, this arc has length one quarter the circumference of the unit circle. Take a moment to find out exactly what that is. Write your answer here (or on a separate sheet of paper):

There, we have a number! Can we say now that that's the measure of our angle? Why or why not? Write down your thoughts:

If we look at any given angle, intuitively we want to measure it, as we've said, by the length of the arc that subtends it. But the problem is, it is subtended by many arcs. An infinite number of arcs. Take, for instance, the right angle we were just considering. Depending on which circle you choose to draw over it (centered at the origin, of course), you could make it subtended by an arc of any length you like by simply making the the circle bigger or smaller. So how can we use arc lengths to measure angles?

One way to do it is simply, as we just did, to choose the unit circle every time. Given any angle, look at the arc on the unit circle that subtends that angle, and call that arc length the measure of the angle. A right angle is subtended by an arc of length—you calculated it earlier—$\frac{\pi}{2}$.[2] So we say that a right angle has measure $\frac{\pi}{2}$. Beautiful!

But picking the unit circle still feels a bit arbitrary. What's so special about the unit circle? Instead of picking a particular circle, shouldn't we pick an arbitrary circle? Angles aren't doors, they're connected rays. Unlike doors, rays are infinitely long, and there's nothing special about one point on the ray versus another (other than the vertex, but we already said we can't use that one). Is there any way that, given an angle we're trying to measure, we can come up with a measure, a number, based on arc length, without it mattering which arc we pick? Sounds crazy. Stop and think about it. Write your thoughts here (or, as before, if appropriate, on a separate sheet of paper):

[2] This is because the unit circle has circumference $2\pi r = 2\pi\,(1) = 2\pi$, one fourth of which is $\frac{\pi}{2}$.

Consider that, for any given angle you're trying to measure, as you choose bigger and bigger arcs, the circles that they are portions of will also be bigger and bigger. And what does it mean for a circle to be bigger? Before moving on, take a moment to recall the precise definition of a circle.

...

A circle is the set of all points equidistant from a center point, and we call that distance the circle's radius. So a circle is defined in terms of its radius. What it *means* for a circle to be "bigger" is that its radius is longer. So the bigger the arc you choose, the bigger the radius that goes along with it. If we choose a circle of radius 2, then instead of getting an arc of length $\frac{\pi}{2}$, we get an arc of length ... well, what's a quarter of this new circle's circumference? Write it down:

That's right, the new arc length is π. That's different from $\frac{\pi}{2}$. Sounds like a problem. But wait, if we got an arc of length $\frac{\pi}{2}$ when we had a circle of radius 1, and we got an arc of length π when we had a circle of radius 2 .... Do we see a pattern? What's the pattern? Write down your thoughts:

Just as every integer, even if we don't write it as a ratio, is a ratio with a denominator of 1, so is every angle measure a ratio. When we pick the unit circle, we are choosing a denominator of 1; when we pick a circle of radius 2, we are choosing a denominator of 2; when we pick a circle of radius 3, we are choosing a denominator of 3; and so on. (I'm picking integers only because they're simple—you could pick literally any positive real number.) But

$$\frac{\frac{\pi}{2} \text{ arc length units}}{1 \text{ radius unit}} = \frac{\pi \text{ arc length units}}{2 \text{ radius units}} = \frac{\frac{3\pi}{2} \text{ arc length units}}{3 \text{ radius units}} = \cdots = \frac{\pi}{2}.$$

So we can reasonably say, without any arbitrary choice, that the measure of a right angle is $\frac{\pi}{2}$. The ratio of arc length to radius doesn't change depending on which circle we pick. Given any angle, if you take an arc that subtends that angle and divide its length by its circle's radius, no matter which circle you choose, you always get the same answer. *The ratio of arc length to radius is constant for any given angle.* Sounds like we've found ourselves a consistent way to measure angles using arc lengths! This is particularly satisfying because it fits with our intuitive notion of angles as representing rotation. This way of measuring angles tells us quite straightforwardly how far the knob of our door has traveled, which is an intuitive way of picturing the size of the angle. Wonderful.

This measure of an angle—the one we get by dividing the arc length (of an arc that subtends the angle) by the radius of the circle (of which that arc is a portion)—is called the **radian measure** of an angle.

Teachnically speaking, the radian measure of an angle is stated in a unit called **radians**, where one radian is defined as the measure of the angle subtended by an arc on the unit circle of arc length 1—but very rarely does any mathematician write out the word "radians" or even the abbreviation "rad" next to the radian measure of an angle, and very rarely is that angle I just described, the one whose measure is 1 radian, ever used for anything. (It's also kind of ugly.[3]) Since the radian measure of an angle is gotten by dividing a length (an arc length) by another length (a radius), the length units cancel, leaving radians a dimensionless unit, or what mathematicians call a "pure number."

[3] Fun exercise: explain why an angle of radian measure 1 is ugly. Or, alternatively, argue that it is beautiful. Feel free to email me with responses.

That was a lot of work! As a way of solidifying the concepts covered in the preceding pages, go ahead and read through the rigorous statements of the definitions you just learned. While learning these definitions verbatim is not necessary, you should be able to give a complete, mathematically precise definition of each of these words from memory.

Definition (ARC)**.** An arc is a portion of a circle.

Definition (SUBTEND)**.** An arc subtends an angle if and only if the angle's two rays pass through the arc's two endpoints.

Definition (RADIAN MEASURE)**.** The radian measure of an angle is the ratio of the length of the arc that subtends the angle to the radius of the circle.

In other words, if s is the length of an arc of a circle, and r is the radius of the circle, then the central angle containing that arc measures $\frac{s}{r}$ radians. In a circle of radius 1, the radian measure corresponds to the length of the arc.

Definition (RADIAN)**.** One radian is the measure of the central angle of a circle such that the length of the arc between the initial side and the terminal side is equal to the radius of the circle.

Complete the following exercises on a separate sheet of paper.

Exercise 1. Find the radian measure of one third of a full rotation.

Solution. The radian measure of one third of a full rotation is

$$2\pi \cdot \frac{1}{3} = \frac{2\pi}{3}.$$

Exercise 2. Find the radian measure of three fourths of a full rotation.

Solution. The radian measure of three fourths of a full rotation is

$$2\pi \cdot \frac{3}{4} = \frac{3\pi}{2}.$$

Exercise 3. Remember that a conversion factor is a fraction, equal to one, that you multiply a measurement by to change its units. For example, to change 2 feet into inches, I multiply 2 feet by the conversion factor $\frac{12 \text{ in}}{1 \text{ ft}}$ to get

$$2 \text{ ft} \times \frac{12 \text{ in}}{1 \text{ ft}} = 24 \text{ in}.$$

The feet cancel, leaving only inches.

Come up with conversion factors to convert from degrees to radians and from radians to degrees.

Solution. There are multiple possible answers, but the standard conversion factors are as follows:

- for converting from degrees to radians:
$$\frac{\pi}{180^\circ}.$$
- for converting from radians to degrees:
$$\frac{180^\circ}{\pi}.$$

Exercise 4. Convert the radian measure $\frac{\pi}{6}$ into degrees.

Solution. In degrees, $\frac{\pi}{6}$ radians is

$$\frac{\pi}{6} \cdot \frac{180^\circ}{\pi} = 30^\circ.$$

Exercise 5. Convert the radian measure 3π into degrees.

Solution. In degrees, 3π radians is

$$3\pi \cdot \frac{180^\circ}{\pi} = 540^\circ.$$

Exercise 6. Convert 15° into radians.

Solution. In radians, 15° is

$$15^\circ \cdot \frac{\pi}{180^\circ} = \frac{\pi}{12}.$$

Exercise 7. Convert 126° ito radians.

Solution. In radians, 126° is

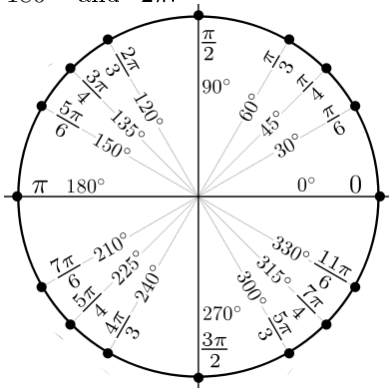
$$126^\circ \cdot \frac{\pi}{180^\circ} = \frac{7\pi}{10}.$$

Exercise 8. In a clear, neat diagram, draw the unit circle, and then sketch in standard position the following angles, given in portions of a full rotation. Then label, at the intersection of each angle's terminal side with the unit circle, the measure of that angle in both degrees and radians. (You may include the unit label "radians" or "rad" on the radian measure if you would like, but you needn't.)

0, 1, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{4}$, $\frac{1}{3}$, $\frac{2}{3}$, $\frac{1}{6}$, $\frac{5}{6}$, $\frac{1}{8}$, $\frac{3}{8}$, $\frac{5}{8}$, $\frac{7}{8}$, $\frac{1}{12}$, $\frac{5}{12}$, $\frac{7}{12}$, and $\frac{11}{12}$

For example, to draw and label an angle that is $\frac{1}{4}$ of a full rotation, you would draw the standard position right angle that we were dealing with all throughout this handout (the one represented by the swinging door) and label it, at the point $(0, 1)$, with the labels "90°" and "$\frac{\pi}{2}$."

Solution. Your diagram should look like the diagram below, but with the added labeling at $(1, 0)$ of "180°" and "2π."



More on Angles

Precalculus
Mr. Simmons

Read through this handout carefully and pause to think and respond when instructed.

Any angle can be measured as being between $0°$ and $180°$. However, imagine a door, not the door we have been picturing for the last two handouts, but a revolving door. It starts out the same as the other door, with its hinge at the origin and its knob at $(1, 0)$, but instead of swinging open $90°$, it revolves in a complete circle three and a half times, ending its rotation with its knob at $(-1, 0)$. What angle does this rotation represent?

Three full turns of a circle plus a half would have an angle measure of $3.5 \cdot 360° = 1260°$. So we say that the angle represented by the abovedescribed rotation has an angle measure of $1260°$.

But now imagine that another person, who was not there when you were pushing the revolving door, walks up and sees the door with its knob at $(-1, 0)$. What angle measure do you think he would ascribe to the angle created by the rotation of the door?

He might assume that the door only swung half a revolution, rather than three and a half revolutions. Thinking this, he would surely say that the angle measure is $180°$. While he is inaccurately measuring the angle of $1260°$, he is accurately measuring what seems to be the same angle. We say that these two angles—of $1260°$ and of $180°$—are **coterminal**, and that the angle of $180°$ is the **reference angle** of the $1260°$-angle. Study these definitions:

Definition (COTERMINAL ANGLES)**.** Two angles are said to be coterminal if and only if they have the same terminal side when in standard position.

Definition (REFERENCE ANGLE)**.** An angle t's reference angle is the smallest acute angle t' formed by the terminal side of the angle t and the horizontal axis.

Complete the following exercises:

Exercise 1. Find the least positive angle of measure θ that is coterminal with an angle measuring $800°$, where $0° \leq \theta < 360°$.

Exercise 2. Find an angle of measure α that is coterminal with an angle measuring $870°$, where $0° \leq \alpha < 360°$.

Exercise 3. Show the angle with measure $-45°$ on a circle and find a positive coterminal angle of measure α such that $0° \leq \alpha < 360°$.

Exercise 4. Find an angle of measure β that is coterminal with an angle measuring $-300°$ such that $0° \leq \beta < 360°$.

Exercise 5. Find an angle of measure β that is coterminal with an angle of measure $\frac{19\pi}{4}$, where $0 \leq \beta < 2\pi$.

Exercise 6. Find an angle of measure θ that is coterminal with an angle of measure $-\frac{17\pi}{6}$ where $0 \leq \theta < 2\pi$.

Let's see what other fun things we can do with angles. Given any central angle of a circle, we know that it is subtended by an arc of that circle, and we've already calculated a few arc lengths. But let's generalize that calculation. Solve the following problem:

Problem. A circle of radius r has a central angle of measure θ. What is the arc length s, in terms of r and θ, of the arc subtended by that angle?

Exercise 7. Use the formula you just derived to find the arc length along a circle of radius 10 of the arc that subtends an angle of $215°$.

In addition to an arc, another shape that appears when we draw a central angle over a circle is a **sector**:

Definition (SECTOR)**.** A sector of a circle is the two-dimensional region of the interior of the circle bounded by a central angle and the arc that subtends that angle.

Solve the following problem:

Problem. Given a circle of radius r with a central angle of measure θ, calculate the area A, in terms of r and θ, of the sector bounded by the angle and its arc. (If it helps, try to calculate the area of a specific sector, say, the sector created by a circle of radius 2 and a central angle of measure $45°$. Then, of course, generalize by stating A in terms of r and θ.)

Exercise 8. Use the formula you just derived to find, given a circle of radius 20 with a central angle of measure 30°, the area of the resulting sector.

We have been imagining angles as representing rotational motion. So we might even ask a questions like, "How fast is the knob of a swinging door moving?" or, "How fast is the door swinging?"[1] These are different questions. The answer to the first will be in units length per unit time (e.g., meters per second), but the second is a questions about an angle, not a point. Just as the question "How wide is an angle?" had a ratio answer (radians), the question "How fast is an angle changing?" will have radians somewhere in the answer. We say that the answer to the first question is a **linear speed**, while the answer to the second is an **angular speed**.

Definition (ANGULAR SPEED)**.** As a point moves along a circle of radius r, its angular speed, ω (omega), is the angular rotation θ per unit time t:

$$\omega = \frac{\theta}{t}.$$

Definition (LINEAR SPEED)**.** The linear speed v of a point moving along a circle of radius r can be found as the distance traveled, arc length s, per unit time t:

$$v = \frac{s}{t}.$$

Problem. Find v in terms of r and ω.

Exercise 9. Find the angular speed of a point moving in a circular motion completing one rotation every five seconds.

Exercise 10. Find the angular speed of a point moving in a circular motion completing 45 rotations per minute.

Exercise 11. A bicycle has wheels 28 inches in diameter. The wheels are rotating at 180 RPM (revolutions per minute). Find the speed at which the bicycle is traveling down the road.

Exercise 12. A satellite is rotating around Earth at 0.25 radians per hour at an altitude of 242 km above Earth. If the radius of Earch is 6378 kilometers, find the linear speed of the satellite in kilometers per hour.

[1] I want to emphasize emphatically that I am not under any illusions that you will ever, in your entire life, have any practical reason for measuring the speed of a swinging door. The concrete image is simply helpful in visualizing the abstract concept of an angle as rotational movement.

More on Angles – Answer Key

Precalculus
Mr. Simmons

Read through this handout carefully and pause to think and respond when instructed.

Any angle can be measured as being between $0°$ and $180°$. However, imagine a door, not the door we have been picturing for the last two handouts, but a revolving door. It starts out the same as the other door, with its hinge at the origin and its knob at $(1, 0)$, but instead of swinging open $90°$, it revolves in a complete circle three and a half times, ending its rotation with its knob at $(-1, 0)$. What angle does this rotation represent?

Three full turns of a circle plus a half would have an angle measure of $3.5 \cdot 360° = 1260°$. So we say that the angle represented by the abovedescribed rotation has an angle measure of $1260°$.

But now imagine that another person, who was not there when you were pushing the revolving door, walks up and sees the door with its knob at $(-1, 0)$. What angle measure do you think he would ascribe to the angle created by the rotation of the door?

He might assume that the door only swung half a revolution, rather than three and a half revolutions. Thinking this, he would surely say that the angle measure is $180°$. While he is inaccurately measuring the angle of $1260°$, he is accurately measuring what seems to be the same angle. We say that these two angles—of $1260°$ and of $180°$—are **coterminal**, and that the angle of $180°$ is the **reference angle** of the $1260°$-angle. Study these definitions:

Definition (COTERMINAL ANGLES)**.** Two angles are said to be coterminal if and only if they have the same terminal side when in standard position.

Definition (REFERENCE ANGLE)**.** An angle t's reference angle is the smallest acute angle t' formed by the terminal side of the angle t and the horizontal axis.

Complete the following exercises:

Exercise 1. Find the least positive angle of measure θ that is coterminal with an angle measuring $800°$, where $0° \leq \theta < 360°$.

Solution. We repeatedly subtract $360°$ from $800°$ to get $440°$ and then $80°$, which is our final answer.

Exercise 2. Find an angle of measure α that is coterminal with an angle measuring $870°$, where $0° \leq \alpha < 360°$.

Solution. We repeatedly subtract $360°$ from $870°$ to get $510°$ and then $150°$, which is our final answer.

Exercise 3. Show the angle with measure $-45°$ on a circle and find a positive coterminal angle of measure α such that $0° \leq \alpha < 360°$.

Solution. The coterminal angle has measure $\alpha = 360° - 45° = 315°$.

Exercise 4. Find an angle of measure β that is coterminal with an angle measuring $-300°$ such that $0° \leq \beta < 360°$.

Solution. The coterminal angle has measure $\beta = 360° - 300° = 60°$.

Exercise 5. Find an angle of measure β that is coterminal with an angle of measure $\frac{19\pi}{4}$, where $0 \leq \beta < 2\pi$.

Solution. We have $\frac{19\pi}{4} - 2\pi = \frac{11\pi}{4}$ and $\frac{11\pi}{4} - 2\pi = \frac{3\pi}{4}$, so $\beta = \frac{3\pi}{4}$.

Exercise 6. Find an angle of measure θ that is coterminal with an angle of measure $-\frac{17\pi}{6}$ where $0 \leq \theta < 2\pi$.

Solution. We have $-\frac{17\pi}{6} + 2\pi = -\frac{5\pi}{6}$ and $-\frac{5\pi}{6} + 2\pi = \frac{7\pi}{6}$, so $\theta = \frac{7\pi}{6}$.

Let's see what other fun things we can do with angles. Given any central angle of a circle, we know that it is subtended by an arc of that circle, and we've already calculated a few arc lengths. But let's generalize that calculation. Solve the following problem:

Problem. A circle of radius r has a central angle of measure θ. What is the arc length s, in terms of r and θ, of the arc subtended by that angle?

Solution. Notice that

$$\text{arc length} : \text{circumference of circle} :: \text{angle measure} : \text{full rotation},$$

or, equivalently,

$$\frac{s}{2\pi r} = \frac{\theta}{2\pi}.$$

Solving for s, we get

$$s = \theta r.$$

Exercise 7. Use the formula you just derived to find the arc length along a circle of radius 10 of the arc that subtends an angle of $215°$.

Solution. The formula gives us

$$\begin{aligned} s &= \theta r \\ &= (215°)\,(10) \\ &= \left(215° \cdot \frac{\pi}{180°}\right)(10) \\ &= \frac{215\pi}{18}. \end{aligned}$$

In addition to an arc, another shape that appears when we draw a central angle over a circle is a **sector**:

Definition (SECTOR)**.** A sector of a circle is the two-dimensional region of the interior of the circle bounded by a central angle and the arc that subtends that angle.

Solve the following problem:

Problem. Given a circle of radius r with a central angle of measure θ, calculate the area A, in terms of r and θ, of the sector bounded by the angle and its arc. (If it helps, try to calculate the area of a specific sector, say, the sector created by a circle of radius 2 and a central angle of measure $45°$. Then, of course, generalize by stating A in terms of r and θ.)

Solution. Notice that

$$\text{area of sector} : \text{area of circle} :: \text{angle measure} : \text{a full rotation},$$

or, equivalently,

$$\frac{A}{\pi r^2} = \frac{\theta}{2\pi}.$$

Solving for A, we get

$$A = \frac{1}{2}\theta r^2.$$

Exercise 8. Use the formula you just derived to find, given a circle of radius 20 with a central angle of measure $30°$, the area of the resulting sector.

Solution. The formula gives us

$$\begin{aligned} A &= \frac{1}{2}\theta r^2 \\ &= \frac{1}{2}\left(30°\right)\left(20\right) \\ &= \frac{1}{2}\left(\frac{\pi}{6}\right)\left(20\right) \\ &= \frac{5\pi}{3}. \end{aligned}$$

We have been imagining angles as representing rotational motion. So we might even ask a questions like, "How fast is the knob of a swinging door moving?" or, "How fast is the door swinging?"[1] These are different questions. The answer to the first will be in units length per unit time (e.g., meters per second), but the second is a questions about an angle, not a point. Just as the question "How wide is an angle?" had a ratio answer (radians), the question "How fast is an angle changing?" will have radians somewhere in the answer. We say that the answer to the first question is a **linear speed**, while the answer to the second is an **angular speed**.

Definition (ANGULAR SPEED)**.** As a point moves along a circle of radius r, its angular speed, ω (omega), is the angular rotation θ per unit time t:

$$\omega = \frac{\theta}{t}.$$

Definition (LINEAR SPEED)**.** The linear speed v of a point moving along a circle of radius r can be found as the distance traveled, arc length s, per unit time t:

$$v = \frac{s}{t}.$$

[1] I want to emphasize emphatically that I am not under any illusions that you will ever, in your entire life, have any practical reason for measuring the speed of a swinging door. The concrete image is simply helpful in visualizing the abstract concept of an angle as rotational movement.

Problem. Find v in terms of r and ω.

Solution. Solving each of the above equations for t gives us

$$t = \frac{\theta}{\omega} \quad \text{and} \quad t = \frac{s}{v}.$$

By substitution, then, we have

$$\frac{\theta}{\omega} = \frac{s}{v},$$

and using the formula for arc length ($s = \theta r$), we get

$$\frac{\theta}{\omega} = \frac{\theta r}{v},$$

and finally, solving for v,

$$v = r\omega.$$

Exercise 9. Find the angular speed of a point moving in a circular motion completing one rotation every five seconds.

Solution. The formula for angular speed gives us

$$\begin{aligned}\omega &= \frac{\theta}{t} \\ &= \frac{2\pi \,\text{rad}}{5\,\text{s}} \\ &= \frac{2\pi}{5}\,{}^{\text{rad}}/_{\text{s}}.\end{aligned}$$

Exercise 10. Find the angular speed of a point moving in a circular motion completing 45 rotations per minute.

Solution. The formula for angular speed gives us

$$\begin{aligned}\omega &= \frac{\theta}{t} \\ &= \frac{(45 \cdot 2\pi)\ \text{rad}}{1\,\text{min}} \\ &= 90\pi\,{}^{\text{rad}}/_{\text{min}}.\end{aligned}$$

Exercise 11. A bicycle has wheels 28 inches in diameter. The wheels are rotating at 180 RPM (revolutions per minute). Find the speed at which the bicycle is traveling down the road.

Solution. The angular speed is given as 180 RPM, which can be converted into

$$\begin{aligned}\omega &= \frac{\theta}{t} \\ &= \frac{(180 \cdot 2\pi)\ \text{rad}}{1\,\text{min}} \\ &= 360\pi\,{}^{\text{rad}}/_{\text{min}}.\end{aligned}$$

The formula for linear speed in terms of angular speed then gives us

$$\begin{aligned} v &= r\omega \\ &= (14\,\text{in})\,(360\pi\,{}^{\text{rad}}/_{\text{min}}) \\ &= 5040\pi\,{}^{\text{in}}/_{\text{min}}. \end{aligned}$$

If we want to, we can convert this into a more natural unit:

$$5040\pi\,{}^{\text{in}}/_{\text{min}} \cdot \frac{1\,\text{ft}}{12\,\text{in}} \cdot \frac{1\,\text{mile}}{5280\,\text{ft}} \cdot \frac{60\,\text{min}}{1\,\text{hr}} \approx 14.99\,\text{mph}.$$

Exercise 12. A satellite is rotating around Earth at 0.25 radians per hour at an altitude of 242 km above Earth. If the radius of Earch is 6378 kilometers, find the linear speed of the satellite in kilometers per hour.

Solution. The angular speed is given as $0.25\,{}^{\text{rad}}/_{\text{hr}}$, and the radius of the circle (not of Earth) is $6378\,\text{km} + 242\,\text{km} = 6620\,\text{km}$, so the formula for linear speed in terms of angular speed gives us

$$\begin{aligned} v &= r\omega \\ &= (6620\,\text{km})\,(0.25\,{}^{\text{rad}}/_{\text{hr}}) \\ &= 1655\,{}^{\text{km}}/_{\text{hr}}. \end{aligned}$$

Remote Learning Packet

NB: Please keep all work produced this week. Details regarding how to turn in this work will be forthcoming.

April 20 -24, 2020

Course: Spanish II

Teacher(s): Ms. Barrera anna.barrera@greatheartsirving.org

Supplemental links: www.conjuguemos.com www.spanishdict.com

Weekly Plan:

Monday, April 20

☐ Capítulo 4B - Read descriptions of good and bad manners at a wedding.

☐ Capítulo 4B - Write about good manners, holidays, and family gatherings.

Tuesday, April 21

☐ Capítulo 4B - Comprehension of sentences and using the appropriate vocabulary.

☐ Capítulo 4B - Translating from English to Spanish. Identifying the etiquettes.

Wednesday, April 22

☐ Capítulo 4B - Describe situations in writing using a series of sequenced sentences with essential simple elaboration.

☐ Capítulo 4B - Reading about the different regions of Spain, its customs, food and dialects.

Thursday, April 23

☐ Capítulo 4B - Read about the geography of Spain, its regions, foods, important cities and landscape.

☐ Capítulo 4B - Comprehension of reading and choosing the appropriate word to complete the sentence.

Friday, April 24

☐ Capítulo 4B - Continuation of the reading of the geography of Spain. Sentence comprehension.

☐ Capítulo 4B -Filling in the blank with the appropriate word.

Statement of Academic Honesty

I affirm that the work completed from the packet is mine and that I completed it independently.

I affirm that, to the best of my knowledge, my child completed this work independently

_____

Student Signature

_____

Parent Signature

Monday, April 20

Capítulo 4B Celebrando los días festivos - Vocabulary in use. Read descriptions of good and bad manners at a wedding. Write about good manners, holidays, and family gatherings. **Please write legibly and dark your answers on a loose leaf piece of paper with your name and date.**

I..**Textbook p.216 - Activity 4** - *El intruso*. Identify the word that does not belong. Then write a complete sentence with the appropriate word that belongs. See the *Modelo* for an example.
II. **Core Practice 4B-4 Handout** - *Dias festivos entre familia.* Read what Isabela's town does every year for the 4th of July and then answer the questions in a complete sentence.

Tuesday, April 21

Capítulo 4B Celebrando los días festivos - Comprehension of sentences and using the appropriate vocabulary. Translating from English to Spanish and indicating if the sentence refers to good or bad manners. **Please write legibly and dark your answers on a loose leaf piece of paper with your name and date.**

I. **Core Practice 4B-8** *Crucigrama* - Practice identifying which vocabulary fits with the sentence.
II. Translate the following sentences to English then write next to it if it, buenos modales o malos modales). For example, We do not shake hands when we meet people. ***Saludamos a personas que primero conocemos. Buenos modales.*** The sentence is in English for you to translate and then next to it you write Buenos modales o malos modales.

1. Greet and smile at other people.
2. She laughs at the groom's mother's dress.
3. She does not get along with the parents of the groom.
4. She congratulates and hugs the bride and groom.
5. She gifts the bride and groom some beautiful dishes.
6. She tells jokes of the mother's bride.

Wednesday, April 22

Capítulo 4B Celebrando los días festivos - Describe situations in writing using a series of sequenced sentences with essential simple elaboration. Reading about the different regions of Spain, its customs, food and dialects. **Please write legibly and dark your answers on a loose leaf piece of paper with your name and date.**

1.Textbook - p.216 **Culture of Spain** - *Euskadi* - Read the article and then answer the question that is located after the reading. Answer in complete sentences.
2.**Textbook** - p.217 **Activity 6 -** *Una costumbre de mi familia*. Read the story about what Alejandra's family did when she was a child. Write the entire story with the appropriate vocabulary from the word bank.

Thursday, April 23

Capítulo 4B Celebrando los días festivos - Read about the geography of Spain, its regions, foods, important cities and landscape. Comprehension of reading using multiple choice and choosing the appropriate word to complete the sentence. **Please write legibly and dark your answers on a loose leaf piece of paper with your name and date.**

I. **Spanish Reading Comprehension**: Read pp. 387 and 388 - *La geografía de España* - **Exercise A**. Choose the appropriate vocabulary that corresponds from the B list. **Exercise B.** Choose the appropriate phrase in order to complete the sentence.

Friday, April 24

Capítulo 4B Celebrando los días festivos - Read about the geography of Spain, its regions, foods, important cities and landscape. Sentence comprehension and indicating whether the sentence is True or False (Cierto of Falso) and then rewriting the sentence to make it true according to the reading. Filling in the blank with the appropriate word from the reading to make the statement complete and true. **Please write legibly and dark your answers on a loose leaf piece of paper with your name and date.**

I. Continuation of the Spanish Reading Comprehension from Thursday. *La geografía de España* - **Exercise C**. Read the sentences and then decide if the statement is true or false. If false, rewrite the sentence to make it true according to the reading. If the sentence is True rewrite the sentence anyway. Make sure you write cierto o falso next to the sentence so I know which sentences you rewrote. There should be 15 sentences. **Exercise D**. Fill in the blank with the appropriate word from the reading. Please write the entire sentence. There should be 15 sentences.

Nombre _____ Hora _____

Capítulo 4B

Fecha _____ Core Practice **4B–4**

Días festivos entre familia

Isabel's favorite holiday is July 4th. Read her description of what they do every year in her town and then answer the questions that follow.

Hoy es mi día favorito. . . es el Día de la Independencia. Cada año mi familia y yo nos reunimos con los vecinos y vamos al centro para ver el desfile. A mucha gente de mi pueblo le gustan los desfiles. Hay algunos que los esperan en un parque cerca del centro. Ellos hacen unos picnics allí donde comen de todo.

En la Gran Vía (*Main Street*) todo el mundo está charlando en anticipación de las carrozas (*floats*) y las bandas musicales. También hay mucha gente importante del pueblo que camina entre las carrozas y bandas. Estas personas sonríen, saludan a la gente y a veces besan a los bebés. Los espectadores se ríen y se divierten mucho mientras que pasa el enorme desfile.

Después del desfile se reúne casi todo el pueblo en el parque. Allí conocemos a gente nueva y hablamos con los viejos amigos. Una vez conocí a las personas que encienden los fuegos artificiales. ¡Me permitieron encender unos pequeños!

1. En tu opinión, ¿a Isabel le gustan los días festivos? ¿Cuál es su día favorito?

   _____

   _____.

2. Describe qué hace la gente antes del desfile.

   _____

   _____.

3. ¿Qué pasa durante el desfile?

   _____

   _____.

4. ¿Toda la gente regresa a sus casas al final del desfile? Si no, ¿qué hacen?

   _____

   _____.

5. ¿Qué le pasó a Isabel una vez?

   _____

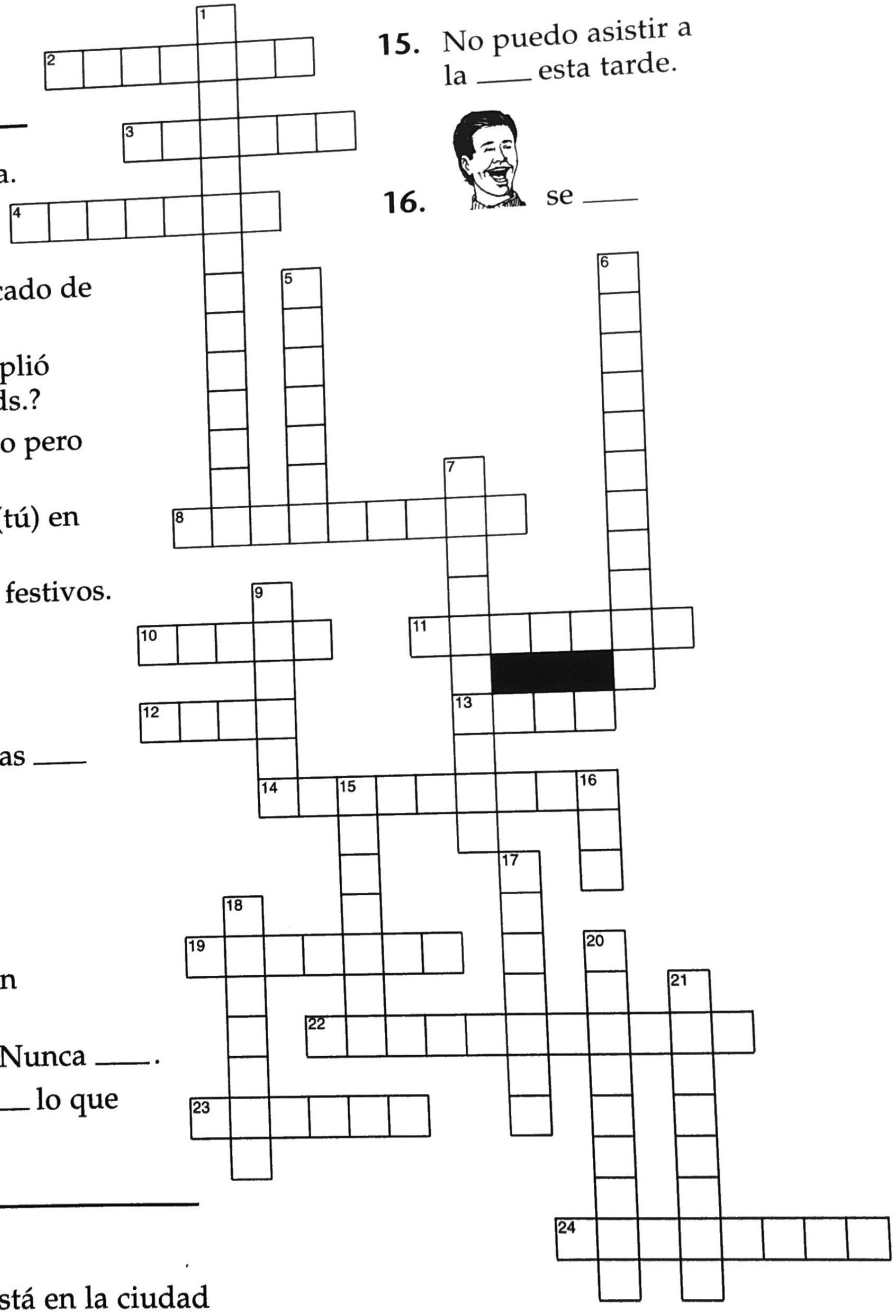
   _____.

Nombre _____ Hora _____

Core Practice **4B–8**

Capítulo 4B Fecha _____

Repaso



Horizontal

2. Se ___ en la sinagoga.

3. Van a hacer un ___ si no llueve.

4. Es un niño bien educado de buenos ___.

8. Cuando Beatriz cumplió años, ¿qué le ___ Uds.?

10. Lola ___ en el campo pero vive en la ciudad.

11. ¿Cuántos años ___ (tú) en marzo?

12. No trabajan los ___ festivos.

13.  la ___

14. Había muchas tiendas ___ de la plaza.

19.  el ___

22. Celebraron su ___ en diciembre.

23. Paco es muy serio. Nunca ___.

24. ¿Tus parientes te ___ lo que pasó?

Vertical

1. *frequently*

5. La zona histórica está en la ciudad ___.

6. Graciela, ¡feliz cumpleaños y ___!

7. Es interesante conocer otras ___.

9.  una ___ de sorpresa

15. No puedo asistir a la ___ esta tarde.

16. se ___

17. Los ___ se reúnen sin sus hijos.

18. Se ___ y se abrazaron.

20. Alejo y yo ___ un poco antes de la clase.

21. Consuelo se ___ mucho con sus amigos.

Nombre _____ Hora _____

Capítulo 4B Fecha _____ Core Practice **4B–4**

Días festivos entre familia

Isabel's favorite holiday is July 4th. Read her description of what they do every year in her town and then answer the questions that follow.

Hoy es mi día favorito. . . es el Día de la Independencia. Cada año mi familia y yo nos reunimos con los vecinos y vamos al centro para ver el desfile. A mucha gente de mi pueblo le gustan los desfiles. Hay algunos que los esperan en un parque cerca del centro. Ellos hacen unos picnics allí donde comen de todo.

En la Gran Vía (*Main Street*) todo el mundo está charlando en anticipación de las carrozas (*floats*) y las bandas musicales. También hay mucha gente importante del pueblo que camina entre las carrozas y bandas. Estas personas sonríen, saludan a la gente y a veces besan a los bebés. Los espectadores se ríen y se divierten mucho mientras que pasa el enorme desfile.

Después del desfile se reúne casi todo el pueblo en el parque. Allí conocemos a gente nueva y hablamos con los viejos amigos. Una vez conocí a las personas que encienden los fuegos artificiales. ¡Me permitieron encender unos pequeños!

1. En tu opinión, ¿a Isabel le gustan los días festivos? ¿Cuál es su día favorito?
   Sí, le gustan los días festivos. El cuatro de julio (el Día de la Independencia) es su día favorito.

2. Describe qué hace la gente antes del desfile.
   Hay gente que espera el desfile en el parque, gente que hace picnics y otras personas, como la familia de Isabel, que se reúnen y van al centro.

3. ¿Qué pasa durante el desfile? Durante el desfile hay bandas musicales y carrozas que pasan por la Gran Vía. También hay mucha gente importante del pueblo caminando con el desfile, saludando y sonriéndole a la gente. Los espectadores se ríen y se divierten mucho

4. ¿Toda la gente regresa a sus casas al final del desfile? Si no, ¿qué hacen?
   No, toda la gente se va al parque para reunirse con otra gente conocida (o algunas veces no conocida).

5. ¿Qué le pasó a Isabel una vez?
   Una vez las personas que encienden los fuegos artificiales le permitieron a Isabel encender unos pequeños.

Nombre _____ Hora _____

Capítulo 4B Fecha _____ Core Practice **4B–8**

Repaso

Horizontal

2. Se ___ en la sinagoga.
3. Van a hacer un ___ si no llueve.
4. Es un niño bien educado de buenos ___.
8. Cuando Beatriz cumplió años, ¿qué le ___ Uds.?
10. Lola ___ en el campo pero vive en la ciudad.
11. ¿Cuántos años ___ (tú) en marzo?
12. No trabajan los ___ festivos.

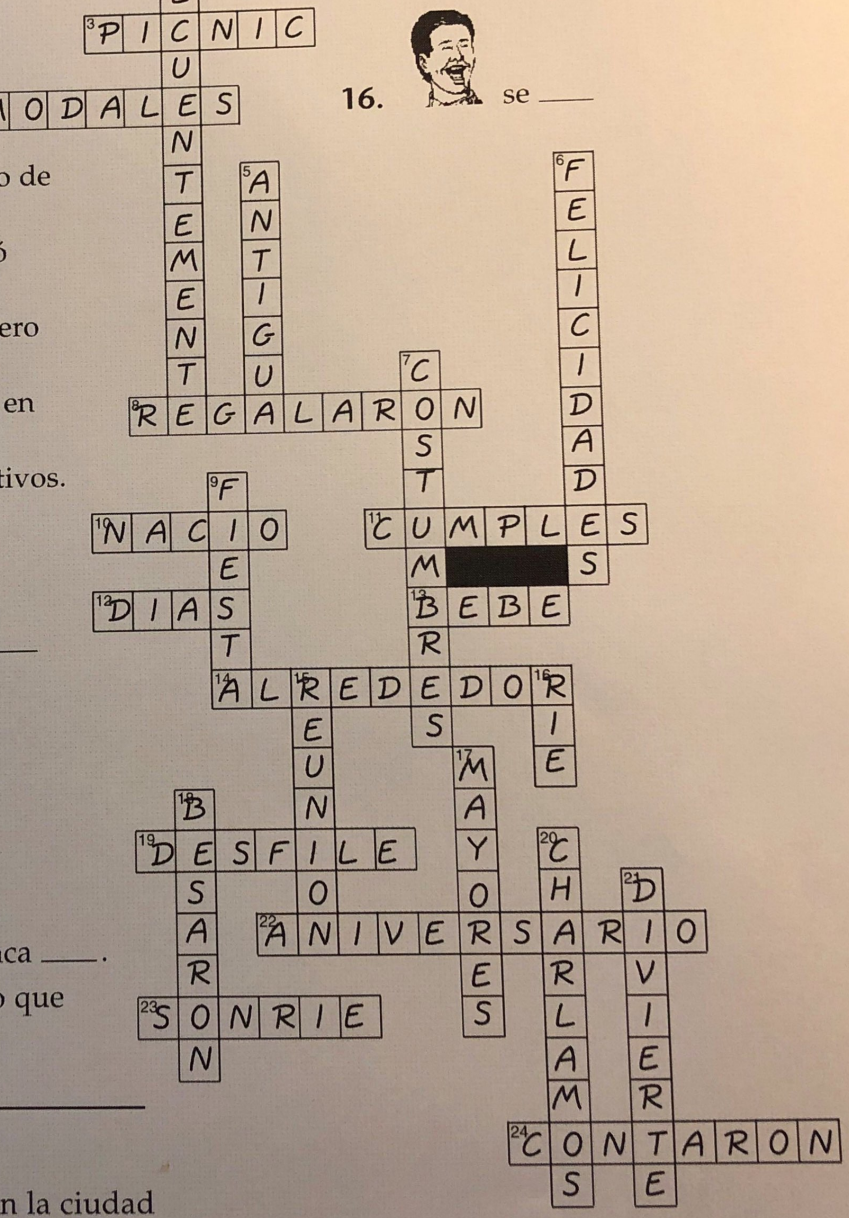
13. ___ la ___
14. Había muchas tiendas ___ de la plaza.

19. ___ el ___
22. Celebraron su ___ en diciembre.
23. Paco es muy serio. Nunca ___.
24. ¿Tus parientes te ___ lo que pasó?

Vertical

1. *frequently*
5. La zona histórica está en la ciudad ___.
6. Graciela, ¡feliz cumpleaños y ___!
7. Es interesante conocer otras ___.

9. una ___ de sorpresa



15. No puedo asistir a la ___ esta tarde.

16. ___ se ___
17. Los ___ se reúnen sin sus hijos.
18. Se ___ y se abrazaron.
20. Alejo y yo ___ un poco antes de la clase.
21. Consuelo se ___ mucho con sus amigos.

Nombre _____ Hora _____

Capítulo 4B Fecha _____ Core Practice **4B–8**

Repaso

Horizontal

2. Se ___ en la sinagoga.

3. Van a hacer un ___ si no llueve.

4. Es un niño bien educado de buenos ___.

8. Cuando Beatriz cumplió años, ¿qué le ___ Uds.?

10. Lola ___ en el campo pero vive en la ciudad.

11. ¿Cuántos años ___ (tú) en marzo?

12. No trabajan los ___ festivos.

13.  la ___

14. Había muchas tiendas ___ de la plaza.

19.  el ___

22. Celebraron su ___ en diciembre.

23. Paco es muy serio. Nunca ___.

24. ¿Tus parientes te ___ lo que pasó?

15. No puedo asistir a la ___ esta tarde.

16.  se ___

Vertical

1. *frequently*

5. La zona histórica está en la ciudad ___.

6. Graciela, ¡feliz cumpleaños y ___!

7. Es interesante conocer otras ___.

9.  una ___ de sorpresa

17. Los ___ se reúnen sin sus hijos.

18. Se ___ y se abrazaron.

20. Alejo y yo ___ un poco antes de la clase.

21. Consuelo se ___ mucho con sus amigos.

Nombre _____ Hora _____

Capítulo 4B Fecha _____ Core Practice **4B–8**

Repaso

Horizontal

2. Se ___ en la sinagoga.

3. Van a hacer un ___ si no llueve.

4. Es un niño bien educado de buenos ___.

8. Cuando Beatriz cumplió años, ¿qué le ___ Uds.?

10. Lola ___ en el campo pero vive en la ciudad.

11. ¿Cuántos años ___ (tú) en marzo?

12. No trabajan los ___ festivos.

13.  la ___

14. Había muchas tiendas ___ de la plaza.

19.  el ___

22. Celebraron su ___ en diciembre.

23. Paco es muy serio. Nunca ___.

24. ¿Tus parientes te ___ lo que pasó?

Vertical

1. *frequently*

5. La zona histórica está en la ciudad ___.

6. Graciela, ¡feliz cumpleaños y ___!

7. Es interesante conocer otras ___.

9.  una ___ de sorpresa

15. No puedo asistir a la ___ esta tarde.

16.  se ___

17. Los ___ se reúnen sin sus hijos.

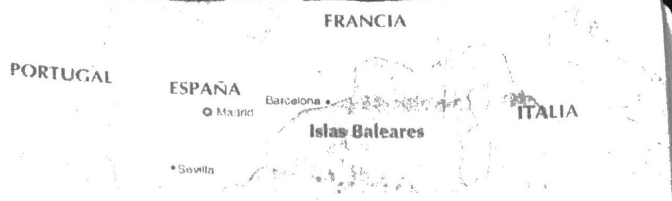
18. Se ___ y se abrazaron.

20. Alejo y yo ___ un poco antes de la clase.

21. Consuelo se ___ mucho con sus amigos.


ESPAÑA
MAR CANTÁBRICO
FRANCIA
Gijón
Cuevas de Altamira
Santander
Bilbao
La Coruña
Oviedo
ASTURIAS
CANTABRIA
PAÍS VASCO
San Sebastián
PIRINEOS
ANDORRA
Santiago de Compostela
MONTES CANTÁBRICOS
Pamplona
NAVARRA
GALICIA
León
Burgos
Logroño
LA RIOJA
ARAGÓN
Vigo
CASTILLA Y LEÓN
Valladolid
Río Ebro
CATALUÑA
Barcelona
Zaragoza
Río Duero
SIERRA DE GUADARRAMA
Segovia
Salamanca
El Escorial
Madrid
OCÉANO ATLÁNTICO
MADRID
Menorca
Mallorca
Palma
PORTUGAL
Río Tajo
Toledo
CASTILLA - LA MANCHA
Valencia
ISLAS BALEARES
EXTREMADURA
LA MANCHA
Ibiza
Lisboa
Mérida
Badajoz
Río Guadiana
Almadén
VALENCIA
Alicante
SIERRA MORENA
Río Guadalquivir
Murcia
MAR MEDITERRÁNEO
Minas de Riotinto
Córdoba
MURCIA
Cartagena
Sevilla
ANDALUCÍA
Palos
Granada
SIERRA NEVADA
Mulhacén
Málaga
Cádiz
Torremolinos
Gibraltar
Ceuta
Melilla
ISLAS CANARIAS
Lanzarote
La Palma
Tenerife
Las Palmas
Gomera
Fuerteventura
Hierro
Gran Canaria
100 M
MARRUECOS
ÁFRICA DEL NORTE
0
100 millas
0
200 kilómetros
▲ Volcán o pico

Chapter 35
La geografía de España



LOCALIZACIÓN DE ESPAÑA

España está situada en el sudoeste de Europa. Ocupa el 80 por ciento de la Península Ibérica, que comparte con Portugal.

EXTENSIÓN Y POBLACIÓN

Su extensión es de unas 200 millas cuadradas, (cuatro veces más grande que la del estado de Nueva York). Tiene una población de unos 40.000.000 de habitantes.

MONTAÑAS

España es un país muy montañoso.

1. Los Montes Pirineos están en el nordeste y marcan la frontera entre España y Francia.
2. La Cordillera Cantábrica está en el noroeste.
3. La Sierra de Guadarrama está en el centro, cerca de Madrid.
4. La Sierra Nevada y la Sierra Morena están en el sur.

RÍOS

1. El Ebro, en el nordeste, desemboca en el Mar Mediterráneo.
2. El Tajo, en la región central, es el río más largo. Pasa por la ciudad de Toledo.
3. El Guadalquivir, en el sur, es el río más profundo y navegable de España. Pasa por las ciudades de Sevilla y Córdoba.

INDUSTRIAS Y PRODUCTOS PRINCIPALES

1. España es un país agrícola e industrial.
2. Los productos principales agrícolas son aceitunas, naranjas, uvas, trigo, limones y corcho.
3. España ocupa el tercer lugar mundial en la producción de vinos de Europa. Los centros principales de la producción de vinos son Málaga y Jerez.
4. España es uno de los productores principales del aceite de oliva del mundo.
5. Sus recursos minerales incluyen carbón, hierro, mercurio, plomo y cobre.

REGIONES

España está dividida en quince regiones:

Cantabria, en el norte.
Galicia, en el noroeste.
Asturias, en el norte al este de Galicia.
el País Vasco, en el norte, con frontera en los Pirineos.
Navarra, en el norte.
Aragón, en el nordeste, al este de Navarra.
Cataluña, en el nordeste.
La Rioja, en el centro al sur de Navarra.
Castilla y León, en el noroeste-centro.
Castilla-La Mancha, en el centro, al sur de Castilla y León.
Madrid, en el centro, al norte de Castilla-La Mancha.
Valencia, en el este.
Extremadura, en el norte, entre Portugal y Castilla-La Mancha.
Murcia, en el sudeste.
Andalucía, en el sur.

POSESIONES ULTRAMARINAS

1. **Las Islas Baleares** están en el Mar Mediterráneo. Mallorca es la isla más grande del grupo.
2. **Las Islas Canarias** están en el Océano Atlántico, cerca de la costa noroeste de Africa.
3. **Ceuta y Melilla** son dos puertos de Marruecos, África.

IDIOMAS

1. El **español** (también llamado el castellano) es el idioma principal de España.
2. El **gallego** es un dialecto que se habla en Galicia.
3. El **catalán** es la lengua de Cataluña.
4. El **vascuence** es la lengua de los vascos, que viven en el País Vasco.

CIUDADES IMPORTANTES

Madrid es la capital y la ciudad más grande de España. Tiene una población de unos 4.500.000 de habitantes. Entre los lugares de mayor interés de Madrid y sus alrededores se encuentran:

1. **El Retiro** es un parque famoso.
2. **La Puerta del Sol** es la plaza principal de Madrid. De allí se extienden muchas calles que conducen a todas partes de la ciudad.

3. **El Museo del Prado** es un museo de bellas artes de fama mundial.
4. **El Escorial** está situado cerca de Madrid. Es un edificio enorme que tiene un monasterio, un palacio, una biblioteca y un mausoleo para reyes españoles. Fue construído por orden del rey Felipe II entre 1563 y 1584.
5. **El Valle de los Caídos** también está situado cerca de Madrid. Es un monumento grandísimo dedicado a la memoria de los soldados que murieron en la Guerra Civil española (1936-1939). El dictador Francisco Franco está enterrado allí.

Barcelona, en la región de Cataluña, es el puerto principal y la ciudad más industrial de España. Tiene unos 4.000.000 de habitantes. Cerca de la ciudad está el famoso Monasterio de Montserrat.

Sevilla, en la región de Andalucía, es la ciudad más pintoresca y romántica. Está situada a orillas del río Guadalquivir. Entre sus lugares de interés se encuentran:

a. ***La Catedral de Sevilla,*** la catedral más grande de España.
b. ***La Giralda,*** una torre de la catedral, es un admirable ejemplo de la arquitectura árabe.
c. ***El Alcázar*** que es un famoso palacio moro.

Valencia es la ciudad principal de la región del mismo nombre. Esta región se llama «la huerta de España» y es famosa por las naranjas que produce.

Bilbao, en el norte, es famosa por su producción de hierro y acero. Tiene el apodo de «el Pittsburgh de España».

Toledo es una antigua ciudad situada en el Río Tajo. Es famosa por sus productos de acero y de metales preciosos. También es conocida por ser la casa del pintor famoso El Greco. Muchas de sus pinturas se exhiben allí.

Granada, en la región de Andalucía, tiene la famosa Alhambra, y también otro palacio moro, el Generalife. Granada fue la última posesión de los moros en España. La volvieron a ganar los cristianos en 1492.

Córdoba, también en Andalucía y situada en el Río Guadalquivir, tiene la famosa **Mezquita** (Mosque), un antiguo templo de la época de los moros, que fue convertido en una catedral católica en 1238. Durante los siglos X y XI Córdoba fue la capital mora de España y uno de los centros culturales de Europa.

Burgos, que se encuentra en Castilla y León, es la ciudad natal del Cid, el héroe nacional de España. Su tumba está en la Catedral de Burgos.

Salamanca es famosa por su universidad. Establecida en el siglo XIII, la **Universidad de Salamanca** es la más antigua de España y una de las más prestigiosas de Europa.

Segovia es una antigua ciudad situada en la parte central de España. Es famosa por el acueducto romano, construido bajo el emperador romano Trajano (A.D. 53-117). El acueducto funciona aun hoy en día.

EXERCISE A. **A la izquierda de cada expresión de la columna A, escriba la letra de la expresión correspondiente de la lista B.**

A	B
_____ *1.* la Península Ibérica	*a.* lengua hablada en Cataluña
_____ *2.* la Sierra de Guadarrama	*b.* río más navegable
_____ *3.* la Puerta del Sol	*c.* construido por orden de Felipe II
_____ *4.* el Tajo	*d.* las Islas Baleares
_____ *5.* Córdoba	*e.* el Cid
_____ *6.* el catalán	*f.* España y Portugal
_____ *7.* Málaga	*g.* región situada en el sur
_____ *8.* El Escorial	*h.* Sevilla
_____ *9.* los Pirineos	*i.* el río más largo
_____ *10.* el Guadalquivir	*j.* centro de la producción de vinos
_____ *11.* Andalucía	*k.* plaza principal de Madrid
_____ *12.* Burgos	*l.* cerca de Madrid
_____ *13.* Mallorca	*m.* puerto de Marruecos
_____ *14.* Cueta	*n* la Mezquita
_____ *15.* La Giralda	*o.* frontera entre España y Francia

EXERCISE B. **Escoja las frases que completen correctamente las oraciones.**

1. La frontera que separa a España de Francia es (la Sierra de Guadarrama, la Sierra Nevada, los Pirineos).

_____

2. España está situada en la parte (sudoeste, nordeste, central) de Europa.

_____

3. Una región del norte de España es (Valencia, Extremadura, Galicia).

_____

4. En (Madrid, Segovia, Valencia) se encuentra un acueducto romano.

_____

5. Andalucía es (una ciudad, un río, una región) de España.

_____

6. Las ciudades de Jerez y Málaga son famosas por sus (aceitunas, vinos, naranjas).

_____

7. (El Generalife, El Escorial, La Mezquita) es un palacio moro.

_____

8. Mallorca es una de (las Islas Baleares, las Islas Canarias, los Cantábricos).

9. La población de España es aproximadamente (40.000.000, 25.000.000, 37.000.000) de habitantes.

10. La catedral más grande de España se encuentra en (Madrid, Burgos, Sevilla).

11. Un dialecto que se habla en Galicia es el (vascuence, catalán, gallego).

12. Salamanca es famosa por su (catedral, universidad, acueducto).

13. Los recursos minerales de España incluyen el (estaño, mercurio, oro).

14. El río más navegable de España es el (Guadalquivir, Tajo, Ebro).

15. El Greco se relaciona con la ciudad de (Burgos, Córdoba, Toledo).

EXERCISE C. **Indique si cada frase es cierta o falsa. Si es falsa, cámbiela para hacerla cierta.**

1. El río Tajo desemboca en el Mar Mediterráneo.

2. La Cordillera Cantábrica marca la frontera entre España y Francia.

3. El Cid, el héroe nacional, nació en la ciudad de Toledo.

4. España tiene una población de más de cuarenta millones de habitantes.

5. El tabaco es un producto principal agrícola de España.

6. La Universidad de Salamanca se estableció en el siglo XIII.

7. Jerez y Málaga son los centros de la producción de vinos.

8. Galicia está en el noroeste del país.

9. Barcelona es el puerto principal de España.
_____

10. Hay veinte regiones tradicionales en España.
_____

11. El vascuence es el idioma principal de España.
_____

12. La Giralda era un templo antiguo de la época de los moros.
_____

13. Las Islas Canarias están en el Mar Mediterráneo.
_____

14. España es un productor principal de jugo de naranja del mundo.
_____

15. Bilbao es la ciudad conocida por su producción de hierro y acero.
_____

EXERCISE D. Complete las frases siguientes.

1. El gallego es el idioma de _____ .
2. En _____ , hay dos ciudades españolas en la costa de Marruecos.
3. Los vascos hablan _____ además del español.
4. Los Pirineos separan a España de _____ .
5. El río más navegable de España es el _____ .
6. Un famoso palacio moro de Sevilla es _____ .
7. El monasterio de Montserrat se encuentra cerca de la ciudad de _____ .
8. La región central de España se llama _____ .
9. El río más grande de España es el _____ .
10. España ocupa la mayor parte de la _____ .
11. La última posesión de los moros en España fue _____ .
12. Durante los siglos X y XI _____ fue la capital mora de España.
13. Dos posesiones ultramarinas de España son _____ y _____ .
14. Dos riquezas mineras de España son _____ y _____ .
15. El museo famoso de Madrid es _____ .