

**9th Grade  
Lesson Plan  
Packet**

**5/11/2020-5/15/2020**

## Remote Learning Packet

*Please submit scans of written work in Google Classroom at the end of the week.*

### **Week 7: May 11-15, 2020**

**Course:** 9 Biology

**Teacher(s):** Mr. Malpiedi michael.malpiedi@greatheartsirving.org  
Ms. Oostindie megan.oostindie@greatheartsirving.org

#### **Weekly Plan:**

Monday, May 11

Complete the skeletomuscular system worksheet

Tuesday, May 12

Complete the circulatory and respiratory system worksheet

Wednesday, May 13

Read and annotate the attached selection on the significance of the heart.

View the video on the significance of the heart.

Thursday, May 14

Complete the endocrine systems worksheet.

View the video on hormone patterns in the body

Friday, May 15

Attend office hours

Catch-up or review the week's work

### **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

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Student Signature

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Parent Signature

## **Monday, May 11**

Complete the *muscular and skeletal system worksheets* using your textbook as a guide. The page numbers listed will be crucial for you to complete the worksheets *but do not take notes on these pages*. Use the worksheets to find and record the most important information from these sections. Be sure to upload your completed worksheet as part of your packet upload this week.

## **Tuesday, May 12**

Complete the *cardiovascular and respiratory system worksheets* using your textbook as a guide. The page numbers listed will be crucial for you to complete the worksheets *but do not take notes on these pages*. Use the worksheets to find and record the most important information from these sections. Be sure to upload your completed worksheet as part of your packet upload this week.

## **Wednesday, May 13**

Read My Heart Leaps Up by Wordsworth aloud carefully. Repeat two more times - enjoy it!  
Watch the video “The Significance of the Heart” on Google Classroom related to details of the heart.

## **Thursday, May 14**

Complete the *endocrine worksheet* using your textbook as a guide. The page numbers listed will be crucial for you to complete the worksheets *but do not take notes on these pages*. Use the worksheets to find and record the most important information from these sections. Be sure to upload your completed worksheet as part of your packet upload this week.

Watch the video “Hormone Cycles” on Google Classroom related to hormone patterns in the human body.

## **Friday, May 15**

Use this day to attend office hours, catch up on work from this week, scan your documents, and enjoy the start of your weekend! *You do not need to include notes in your packet submission*, only the documents listed: skeletal system worksheet, muscular system worksheet, cardiovascular system worksheet, respiratory system worksheet, endocrine system worksheet.



## Muscular System

**Directions:** Using the provided pages in your textbook to answer the following questions in complete sentences or fill in the blanks.

### Structure (pp.919, 921-922)

1. Skeletal muscles are made of strands called \_\_\_\_\_.
2. Each one of those strands is made of protein filaments called \_\_\_\_\_.
3. The thicker kind of protein filament is called \_\_\_\_\_. The thinner kind is called \_\_\_\_\_.
4. The tough tissue that connects muscle to bone is \_\_\_\_\_.
5. Muscles require lots of energy. Therefore, muscle cells usually contain many of which organelle? \_\_\_\_\_.

### Function (pp. 918-919, 921-922)

6. Which kind of muscle tissue is activated when lifting a sack of flour? \_\_\_\_\_.
7. Which kind of muscle tissue helps move waste along the digestive tract? \_\_\_\_\_.
8. How do muscles allow for movement of the body?  
\_\_\_\_\_.
9. Why does strenuous activity cause oxygen debt? What is the result?

10. Do muscles push? Do they pull? What do they do?

11. Using the anatomy on p. 917 (and your own experience), list the muscles involved in a pushup.  
Why do we call this a “push” motion?

## On the Heart

Read the Wordsworth poem three times aloud. Take your time, and enjoy the work. Once you have done so, head over to Google Classroom and watch the video “The Significance of the Heart.”

### **My Heart Leaps Up**

BY WILLIAM WORDSWORTH

My heart leaps up when I behold  
A rainbow in the sky:  
So was it when my life began;  
So is it now I am a man;  
So be it when I shall grow old,  
Or let me die!  
The Child is father of the Man;  
And I could wish my days to be  
Bound each to each by natural piety.

Here is a delightful optional extra bonus poem that further exemplifies the relationship of the heart with soul and being:

### **A Birthday**

BY CHRISTINA ROSSETTI

My heart is like a singing bird  
Whose nest is in a water'd shoot;  
My heart is like an apple-tree  
Whose boughs are bent with thickset fruit;  
My heart is like a rainbow shell  
That paddles in a halcyon sea;  
My heart is gladder than all these  
Because my love is come to me.

Raise me a dais of silk and down;  
Hang it with vair and purple dyes;  
Carve it in doves and pomegranates,  
And peacocks with a hundred eyes;  
Work it in gold and silver grapes,  
In leaves and silver fleurs-de-lys;  
Because the birthday of my life  
Is come, my love is come to me.

## Cardiovascular System

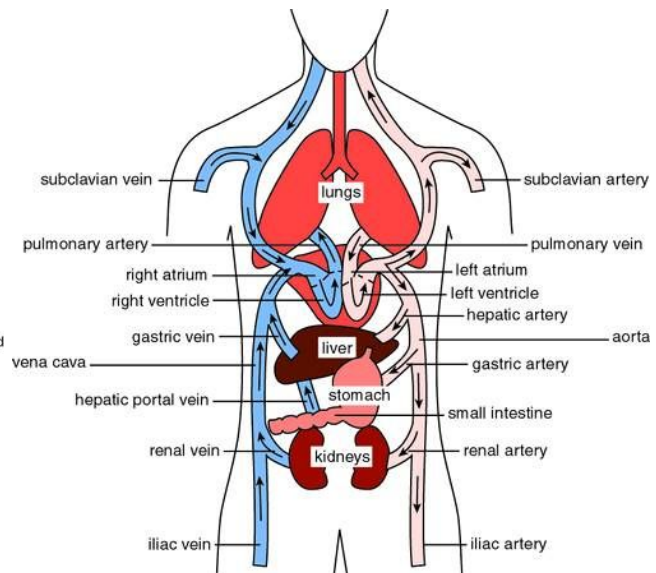
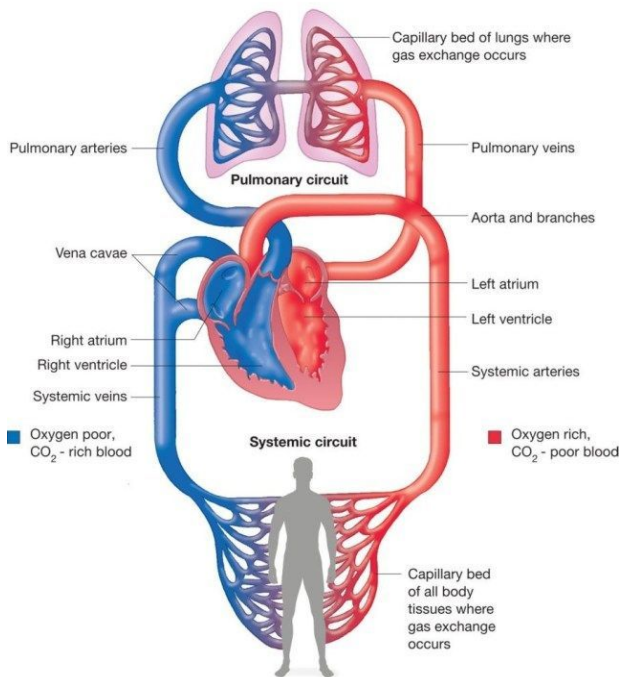
**Directions:** Using the provided charts and pages in your textbook to answer the following questions in complete sentences or fill in the blanks.

### Structure (pp. 933, 936-937)

1. What is the main organ of the cardiovascular system? \_\_\_\_\_
2. The second major component of the cardiovascular system are \_\_\_\_\_.
3. \_\_\_\_\_ are the blood vessels that carry blood *away* from the heart.
4. \_\_\_\_\_ are the blood vessels that carry blood *to* the heart.
5. \_\_\_\_\_ are the blood vessels whose walls are thin enough for gases and nutrients to diffuse across through the wall.

### Function (pp. 940-941)

6. \_\_\_\_\_ is the component of blood that carries nutrients and metabolites to cells.
7. Red blood cells are responsible for the transport of \_\_\_\_\_ to all parts of the body.
8. \_\_\_\_\_ defend the body against disease by engulfing invading pathogens using phagocytosis.





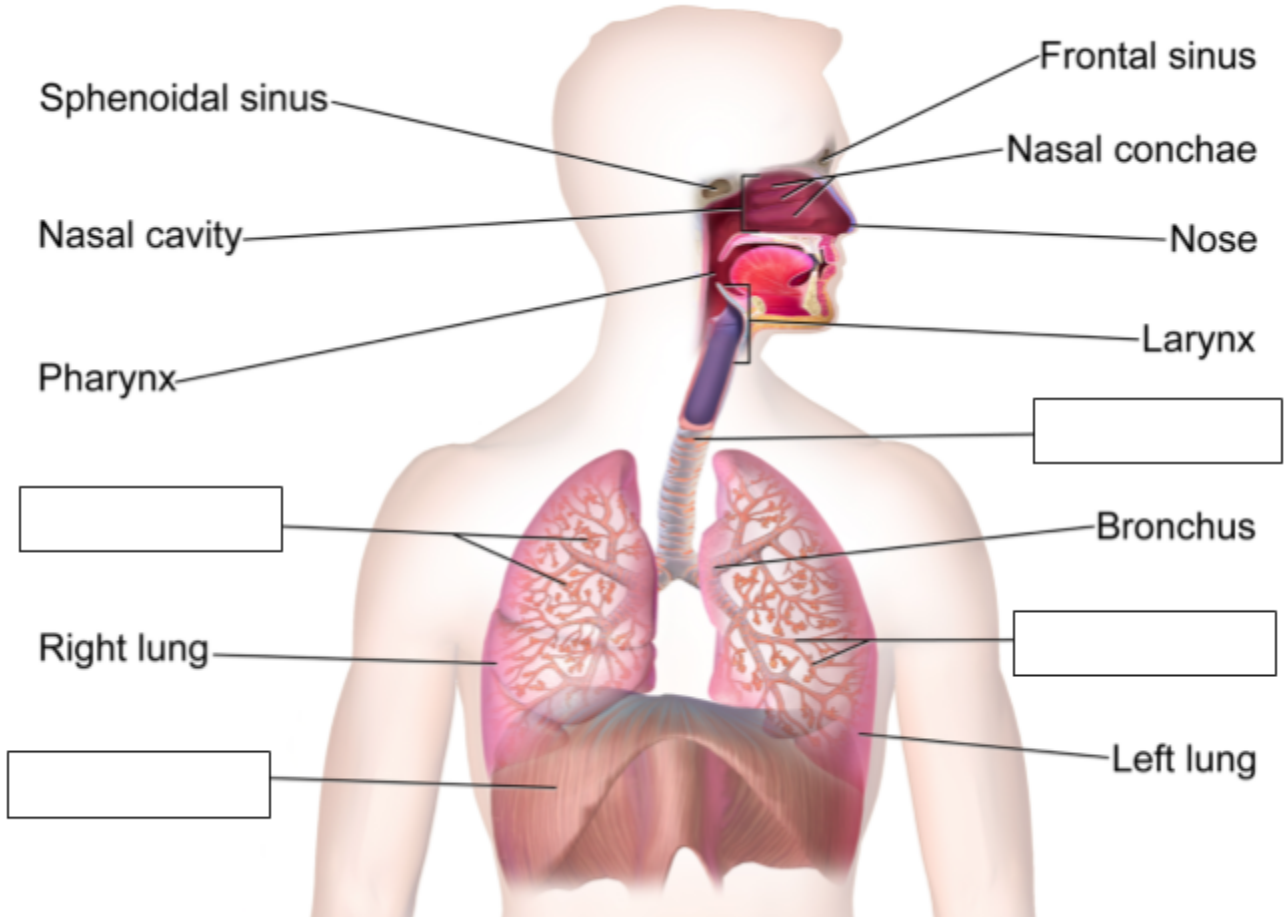


## Respiratory System

**Directions:** Using the provided charts and pages in your textbook to answer the following questions in complete sentences or fill in the blanks.

### Structure (pp. 946-947)

1. Label the missing structures



2. List the missing structures air passes through during inhalation.

- I. Nose or mouth
- II. Pharynx
- III. Larynx
- IV. \_\_\_\_\_
- V. \_\_\_\_\_
- VI. Bronchiole
- VII. \_\_\_\_\_

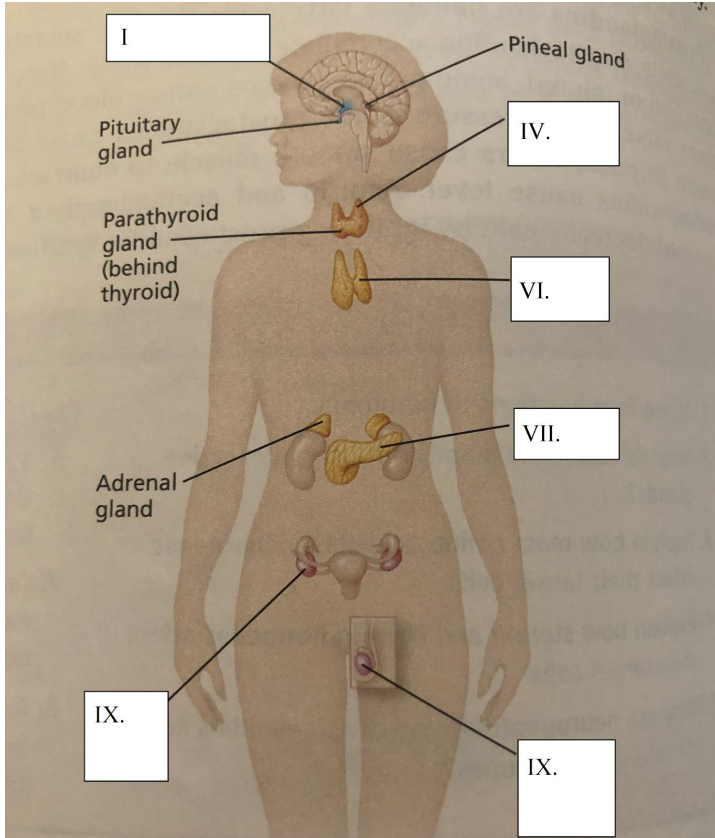


## Endocrine System

**Directions:** Using the provided charts and pages in your textbook to answer the following questions in complete sentences or fill in the blanks.

### Structure (pp. 1034)

Label the missing structures of the endocrine system



- I. \_\_\_\_\_
- II. Pineal gland
- III. Pituitary gland
- IV. \_\_\_\_\_
- V. Parathyroid gland
- VI. \_\_\_\_\_
- VII. \_\_\_\_\_
- VIII. Adrenal gland
- IX. \_\_\_\_\_ (female)/  
\_\_\_\_\_ (male)

**Function (pp. 1035-1039)** - for the glands *provided* above, list the hormones they secrete, and the final cause of that hormone.

Gland	Hormone(s)	Function of Hormone(s)
Pineal gland		
Pituitary gland (choose four hormones)		
Parathyroid gland		
Adrenal gland (cortex and medulla)		

1. What is the difference between positive and negative feedback mechanisms (p.1041-1042)?
  
2. Why might an overactive parathyroid gland cause bone problems?

## Remote Learning Packet

*Please submit scans of written work in Google Classroom at the end of the week.*

### **Week 7: May 11-15, 2020**

**Course:** 9 Geometry

**Teacher(s):** Mr. Mooney sean.mooney@greatheartsirving.org

#### **Weekly Plan:**

Monday, May 11

- Review Bell Work and Proposition Questions Answer Keys
- Review VI.5, VI.6, VI.8 answer keys and make corrections

Tuesday, May 12

- Video on Google Classroom (Optional and Encouraged)
- Bell Work 8
- VI.9 and 11 two-columns and constructions

Wednesday, May 13

- Video on Google Classroom (Optional and Encouraged)
- Bell Work 9
- VI.12 and 13 two-columns and constructions

Thursday, May 14

- Video on Google Classroom (Optional and Encouraged)
- Bell Work 10 and Note on VI.16
- VI.16 Two-Column

Friday, May 15

- attend office hours
- catch-up or review the week's work

### **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

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Student Signature

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Parent Signature

Dear Students,

I cannot believe it is already May 11th! I hope you all are doing well as we approach the end of the school year and our study of Euclid's *Elements*. This week, we will be keeping to the same routine as last week: Monday review and corrections; videos on Tuesday through Thursday; and Friday catch-up/review, Office Hours, and packet upload (as we will be doing for the rest of the *year*).

We will be continuing to make our way through Book VI this week. Unfortunately, given our limited time, we are going to begin jumping around quite a bit, skipping many good and worthwhile propositions. As always, you are encouraged to read these on your own if you have the time and the desire, but of course I will not require it. We will also begin, this week, to work a *little* bit of number into the Bell Works, so that you can get a feel for how ratio and proportion work for that non-geometrical magnitude.

I won't be so bold as to boast of no typos this time (tens of "awesome points" were justly distributed last week), but my goal will be to keep them to a minimum. Also, I hope that the videos last week helped to make the propositions more accessible to you. Obviously, nothing can replace being in the classroom, but I hope it helped us get just a little closer to that ideal.

I wish you a wonderful week. Enjoy the beautiful weather, and the beautiful propositions from Book VI!

Sincerely,  
Mr. Mooney

## **Monday, May 11**

Today, I would like you to:

- 1) Review the answer keys for all the Bell Work and Proposition Questions from last week, which you will find as scanned documents in this packet. You need not submit your corrections to these parts, but I encourage you to correct them nonetheless for the sake of improving your understanding.
- 2) Review the "answer keys" for propositions VI.5, 6, and 8, and correct your two-column notes from last week. Please scan and submit these corrected two-columns along with the rest of your packet at the end of the week (just as you did last week).

## **Tuesday, May 12**

Today, I would like you to:

- 1) Complete Bell Work 8. This bell work asks you to apply the ideas that you have learned about proportions in geometrical figures to *number*. We will continue to practice this skill all week.
- 2) Read VI.9 and put it into two-column notes. Then, perform the construction below with compass and straightedge. I am including a *different* two-column sheet for this proposition, with space for the construction underneath it.

VI.9 is about cutting off a "prescribed part" from a given line. Remember the definition of "part" from the beginning of Book V. Essentially, this proposition enables to take any fraction of any line. For example, given a line, take one fourth of it, or one tenth, or one forty-fifth. In Euclid's

*Elements*, he takes one third of the line, and we will do the same in our construction, but it is important to note that the construction applies equally well to *any* fraction.

(Optional: I am including a little “refresher” on how to do I.31, the construction of a parallel line, since it will be used in multiple constructions this week.)

- 3) Do the same for VI.11, writing out the two-column notes and constructing it underneath with compass and straightedge.

VI.11, as you will see, enables us to find a third proportional. As you’ll recall, a third proportional is a magnitude (in this case, a line) that is the final term in a proportion in three terms. That is, it allows us to find some magnitude  $C$ , such that  $A:B::B:C$ .

### **Wednesday, May 13**

Today, I would like you to:

- 1) Complete Bell Work 9, which looks at proportions in figures that have numerical lengths and asks you to find missing lengths.
- 2) Read VI.12 and put it into two-column notes. Then, perform the construction below with compass and straightedge. Again, I am including a different two-column sheet for this proposition, with space for the construction underneath it.

VI.12 enables us to find a fourth proportional. That is, it allows you to find some magnitude  $D$ , such that  $A:B::C:D$ .

- 3) Do the same for VI.13, writing out the two-column notes and constructing it underneath with compass and straightedge.

VI.13 enables us to what is called a “mean proportional.” The mean proportional is some magnitude  $B$  that relates to two other magnitudes  $A$  and  $C$  as the middle term in a proportion in three terms:  $A:\underline{B}::\underline{B}:C$ .

### **Thursday, May 14**

Today, I would like you to:

- 1) Complete Bell Work 10, which looks specifically at proportions within the special case of VI.8.
- 2) Read the Note on VI.16, which you will find beneath today’s bell work.
- 3) Read VI.16 and write it out in two-column notes.

### **Friday, May 15**

Congratulations! Another week successfully completed, with good progress made in your understanding of ratio and proportion.

Use today to finish up any work you may still need to do from the week, attend my Office Hours from 10:30 - 11:00am (you can find the Zoom link on Google Classroom), and upload your packets onto Google Classroom. I hope to see you in Office Hours!

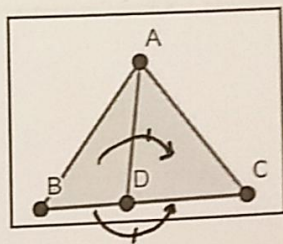
Have a wonderful weekend, filled only with what is True, Good, and Beautiful.

Bell Work 5:

Directions: Provide the resulting proportion for each. Then, mark the resulting proportion on the diagram.

1. If triangles ABD and ADC are under the same height,

then  $\triangle ABD : \triangle ADC :: BD : DC$

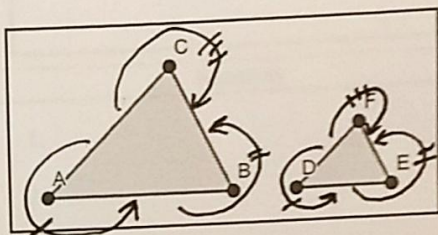


2. If triangles ABC and DEF are equiangular,

then  $AC : AB :: DF : DE$

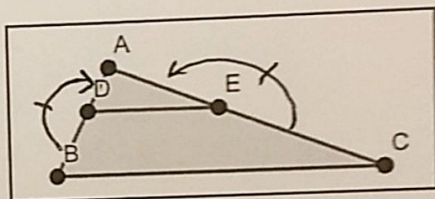
$AB : BC :: DE : EF$

and  $AC : BC :: DF : EF$



3. If in triangle ABC, DE is parallel to BC,

then  $BD : DA :: CE : EA$



**Note about Triangle Similarity Propositions:**

Last week, you proved VI.4, which says that if two triangles are equiangular, then the sides about the equal angles will be proportional. As I said in my note on AAA Similarity last week, this would then mean that the two triangles are similar, because they are both equiangular and have proportional sides.

This week we will encounter two more similarity propositions: SSS Similarity and SAS Similarity. Like AAA Similarity (VI.4), these propositions will not make any explicit mention of similarity.

They will, however, in their "if" and "then," total up to similarity. Let me explain. VI.Def.1 has a list of requirements for two shapes to be similar: they need to have (1) all equal angles and (2) all proportional sides about those equal angles. In each Similarity proposition, the "if" portion meets half of those criteria, while the "then" portion meets the other half.

In all of these proofs, you may write as your conclusion that the triangles are similar, or you may keep to the way that Euclid wrote it. Either way, be mindful of the fact that the end result in all three of these propositions is that the triangles are similar, having both equiangularity and proportionality of sides.

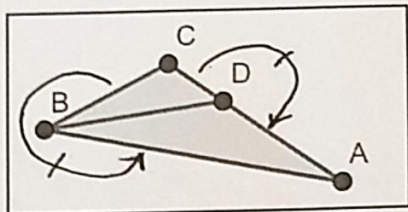


Bell Work 6 and VI.6 Questions

Bell Work 6:

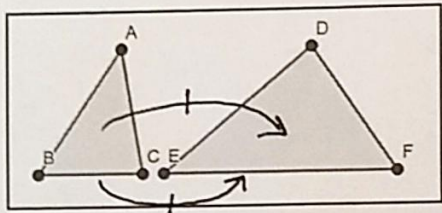
Directions: Provide the resulting proportion for each. Then, mark the resulting proportion on the diagram.

1. If in triangle ABC, angle CBA is bisected by BD, then  $CD : DA :: BC : BA$

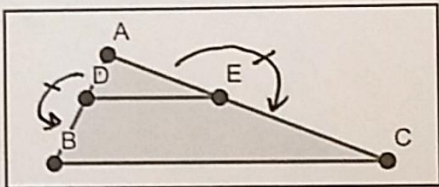


2. If triangles ABC and DEF under the same height, then  $\Delta ABC : \Delta EDF :: BC : EF$

(This is a bit tricky, because the diagram looks a little different than we are used to seeing.)

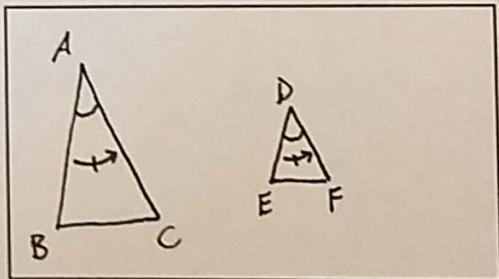


3. If in triangle ABC, DE is parallel to BC, then  $AD : DB :: AE : EC$



VI.6 Questions

1. Draw the diagram in the box on the right, including *only the given parts* (i.e. do not include anything that was constructed). Mark the given.
2. When triangle DGF is constructed, it is constructed so that it will be similar to triangle  $\Delta ABC$ .



3. It (triangle DGF) is then proven to be congruent to triangle  $DEF$ .
4. Thus, by the end of the proof, it can be concluded that triangle  $DEF$  is equiangular with triangle  $ABC$ .
5. Since the triangles (from #4) are equiangular and have proportional sides, they would therefore be similar. [This is not included in Euclid's proof, but it is implied.]

Bell Work 7 and VI.8 Questions

Bell Work 7:

Directions: Provide the resulting proportion for each. Then, mark the resulting proportion on the diagram.

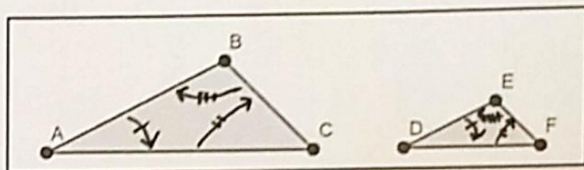
1. Define ratio (V.Def.3): A ratio is a sort of relation in respect of size between two magnitudes of the same kind.
2. In your own words, describe what a proportion is: A proportion is a statement that two ratios are the same. (Answers may vary.)

3. If triangles ABC and DEF are equiangular,

then  $AB:AC :: DE:DF$

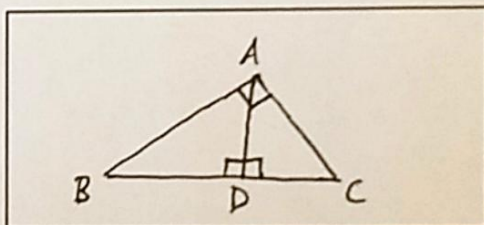
$AC:BC :: DF:EF$

and  $BC:AB :: EF:DE$



VI.8 Questions

1. Draw the diagram in the box on the right, including only the given parts (i.e. do not include anything that was constructed). Mark all given information.



2. What are the two things proven in this proposition? (Euclid proves them in separate sections of his proof.)

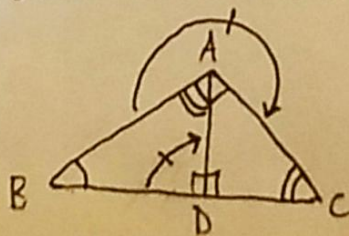
1.  $\triangle ABD \text{ ; } \triangle ADC$  are similar to whole  $\triangle ABC$ .

2.  $\triangle ABD \text{ ; } \triangle ADC$  are similar to each other.

3. To prove that the two smaller triangles similar to the whole, Euclid first needs to prove that they are equiangular. To do so, he relies on the right angles, common angles (i.e. shared between the triangles), and I.32. Explain, in your own words, how he does this.

Each of the 3 triangles has a right angle, and each of the smaller triangles shares one angle with the whole. For example,  $\triangle ABD$  and whole  $\triangle ABC$  both have a right angle and they share  $\angle ABD$  in common.

4. In the space below, redraw the diagram, and mark one true proportion that results from the fact that the two smaller triangles are similar to the whole and to each other.



Therefore, by I.32, since the angles of all  $\Delta$ 's add up to the same ( $2 \text{ Rts}$ ), the third angles must be equal as well, making them similar (VI.4).

# Answer Key

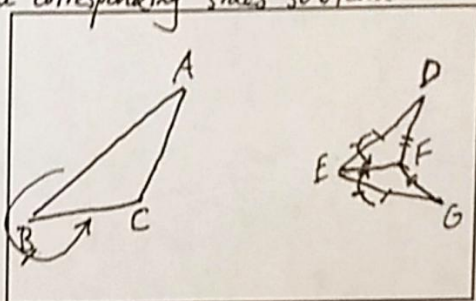
VI.5: If 2  $\Delta$ 's have their sides proportional, the triangles will be equiangular, and will have those angles equal which the corresponding sides subtend.

Given:

$$\begin{aligned} \Delta ABC, \Delta DEF, \quad AB:BC &:: DE:EF \\ BC:CA &:: EF:FD \\ AB:CA &:: DE:FD \end{aligned}$$

To Prove:

$$\begin{aligned} \Delta ABC \hat{=} \Delta DEF \text{ equiangular} \quad \angle ABC = \angle DEF \\ \angle BCA = \angle EFD \\ \angle BAC = \angle EDF \end{aligned}$$



Statements	Reasons
1. Construct at E, $\angle FEG = \angle ABC$	1. I.23
2. and at F, $\angle EFG = \angle ACB$	2. I.23
3. $\therefore \angle A = \angle G$	3. I.32
4. $\therefore \Delta ABC \hat{=} \Delta GEF$ are equiangular	4. Steps 1-3 (Def. of equiangular)
5. $\therefore AB:BC :: GE:EF$	5. VI.4 (AAA $\sim$ )
6. But $AB:BC :: DE:EF$	6. Given
7. $\therefore DE:EF :: GE:EF$	7. V.11
8. $\therefore DE = GE$	8. V.9
9. $\therefore DF = GF$	9. Similar argument (steps 5-8)
10. EF is common	10. —
11. $\therefore \angle DEF = \angle GEF$	11. I.8 (SSS $\cong$ )
12. $\angle DFE = \angle GFE$	12. } I.4 (SAS $\cong$ ) 13. }
13. $\angle EDF = \angle EGF$	
14. $\therefore \angle ABC = \angle DEF$	14. C.N.1 (steps 1 & 11)
15. $\therefore \angle ACB = \angle DFE$	15. C.N.1 (steps 2 & 12)
16. $\therefore \angle A = \angle D$	16. C.N.1 (steps 3 & 13) (or I.32)
17. $\therefore \Delta ABC$ is equiangular w/ $\Delta DEF$	17. Steps 14-16 (def of equiangular)
18. _____	18. _____
19. _____	19. _____
20. _____	20. _____

Answer key

VI.6: If 2  $\Delta$ 's have one angle equal to one angle and the sides about the equal angles proportional, the triangles will be equiangular and will have those  $\angle$ 's = which the corresponding sides subtend.

Given:

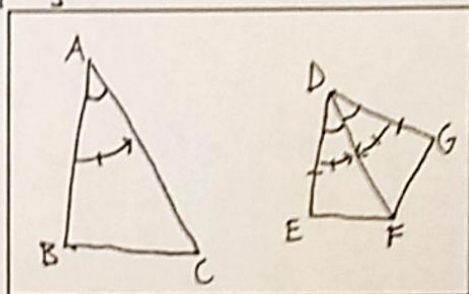
$$\Delta ABC, \Delta DEF; \angle BAC = \angle EDF$$

$$BA : AC :: ED : DF$$

To Prove:

$$\Delta ABC \text{ equiangular w/} \Delta DEF \quad \angle ABC = \angle DEF$$

$$\angle ACB = \angle DFE$$



Statements	Reasons
1. Construct at D, $\angle FDG = \angle BAC$ (or $\angle EDF$ )	1. I.23
2. Construct at F, $\angle DFG = \angle ACB$	2. I.23
3. $\therefore \angle B = \angle G$	3. I.32
4. $\therefore \Delta ABC$ is equiangular w/ $\Delta DEF$	4. steps 1-3 (def. of equiangular)
5. $\therefore BA : AC :: GD : DF$	5. VI.4 (AAA $\sim$ )
6. But $BA : AC :: ED : DF$	6. Given
7. $\therefore ED : DF :: GD : DF$	7. V.11
8. $\therefore ED = GD$	8. <del>V.9</del>
9. $DF$ is common	9. —
10. $\angle EDF = \angle GDF$	10. Step 1
11. $\therefore \angle DFG = \angle DFE$	11. I.4 (SAS $\cong$ )
12. and $\angle DGF = \angle DEF$	12. I.4 (SAS $\cong$ )
13. But $\angle DFG = \angle ACB$	13. step 2
14. $\therefore \angle ACB = \angle DFE$	14. C.N.1 (steps 11 & 13)
15. And $\angle BAC = \angle EDF$	15. Given
16. $\therefore \angle B = \angle E$	16. I.32
17. $\therefore \Delta ABC$ is equiangular w/ $\Delta DEF$	17. steps 14, 15, 16 (def. of equiangular)
18. _____	18. _____
19. _____	19. _____
20. _____	20. _____

## Answer Key

VI-8: If in a right-angled  $\Delta$  a perpendicular be drawn from the right angle to the base, the  $\Delta$ s adjoining the perpendicular are similar both to the whole and to each other.

Given:

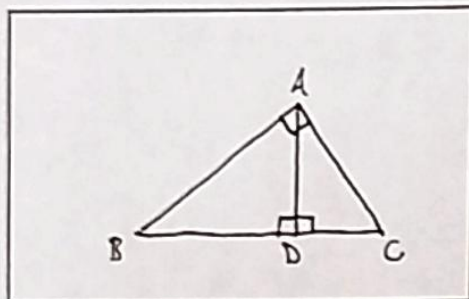
$\Delta ABC$ , w/  $\angle BAC$ ;  $AD \perp BC$

To Prove:

$\Delta ABD \sim \Delta ABC$

$\Delta ADC \sim \Delta ABC$

$\Delta ABD \sim \Delta ADC$



Statements	Reasons
1. $\angle BAC, \angle ADB$	1. Given
2. $\therefore \angle BAC = \angle ADB$	2. Post. 4
3. $\angle B$ is common to $\Delta ABC, \Delta ABD$	3. —
4. $\therefore \angle ACB = \angle BAD$	4. I. 32
5. $\therefore \Delta ABC$ equiangular w/ $\Delta ABD$	5. Steps 2-4
6. $\therefore BC:BA :: AB:BD :: AC:AD$	6. VI. 4 (AAA $\sim$ )
7. $\therefore \Delta ABC \sim \Delta ABD$	7. VI. Def. 1
8. Similarly $\Delta ABC \sim \Delta ADC$	8. Similar argument (steps 1-7)
9. $\angle BDA = \angle ADC$	9. Post. 4 (Given as $\perp$ s)
10. $\angle BAD = \angle C$	10. Step 4
11. $\angle B = \angle DAC$	11. I. 32
12. $\therefore \Delta ABD$ equiangular w/ $\Delta ADC$	12. Steps 9-11
13. $\therefore BD:DA :: AD:DC :: BA:AC$	13. VI. 4
14. $\therefore \Delta ABD \sim \Delta ADC$	14. VI. Def. 1
15. _____	15.
16. _____	16.
17. _____	17.
18. _____	18.
19. _____	19.
20. _____	20.

Bell Work 8

Bell Work 8:

Part 1: Proportions in four terms

**Directions:** Complete the following numerical proportions by filling in the blank.

1.  $1:2 :: 5: \underline{\quad}$

2.  $3:4 :: 9: \underline{\quad}$

3.  $2:3 :: 12: \underline{\quad}$

4.  $4: \underline{\quad} :: 8:10$

5.  $6: \underline{\quad} :: 3:8$

6.  $\underline{\quad}:15 :: 3:9$

Part Two: Proportions in Three Terms

**Directions:** For the following proportions, fill in the two blanks with the same number to make the proportion true.

*Example:*  $1: \underline{\quad} :: \underline{\quad}:4$  What number can go in both blanks to make the proportion true? The answer is 2, because 2 is both the double of 1 and the half of four. Thus  $1:2 :: 2:4$ .

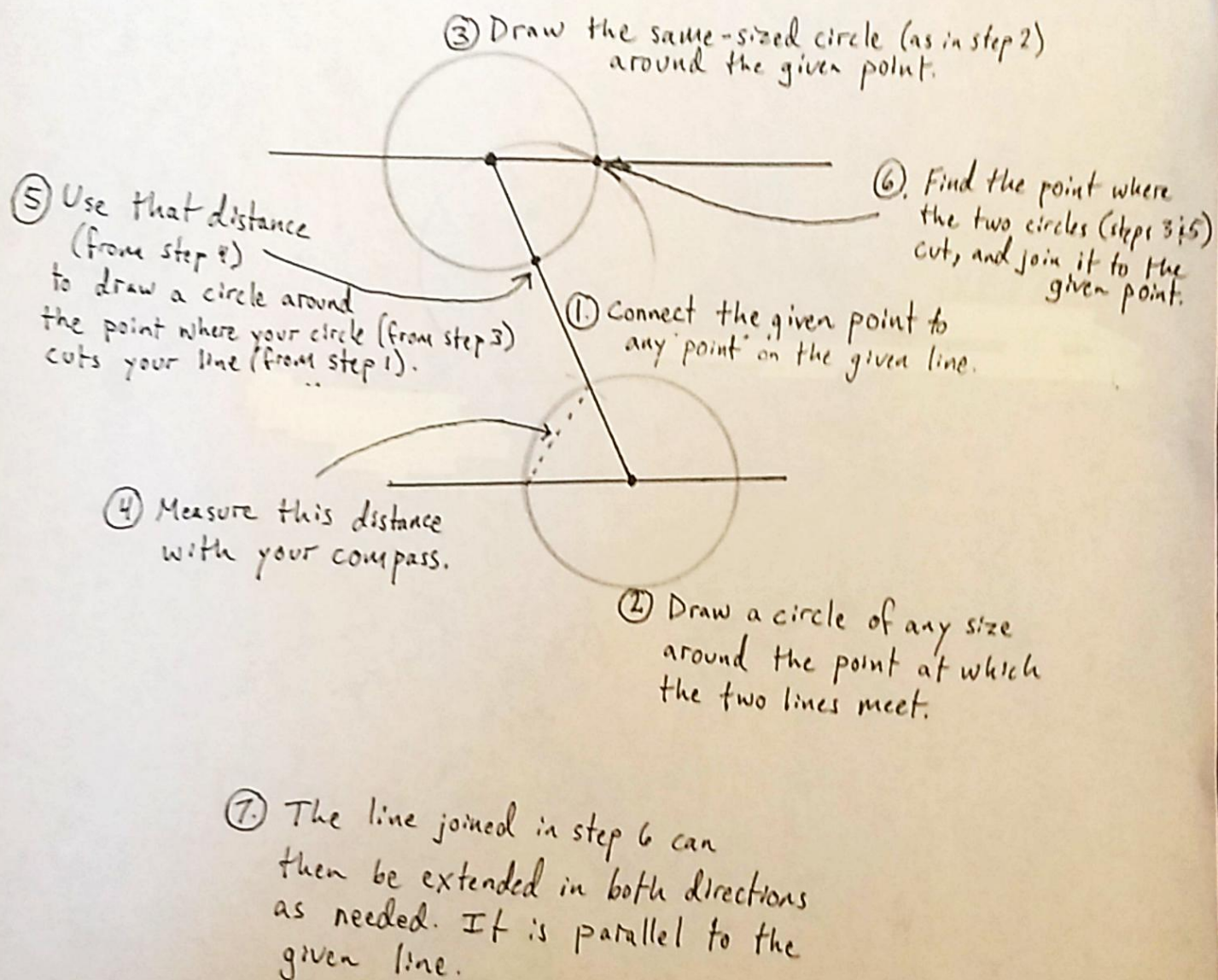
7.  $2: \underline{\quad} :: \underline{\quad}:8$

8.  $3: \underline{\quad} :: \underline{\quad}:12$

9.  $1: \underline{\quad} :: \underline{\quad}:9$

10.  $1: \underline{\quad} :: \underline{\quad}:25$

## I.31 "Refresher" (Optional)



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**VI.9** : From a given straight line to cut off a prescribed part.

Given:



To Prove:

Statements	Reasons
1. _____	1.
2. _____	2.
3. _____	3.
4. _____	4.
5. _____	5.
6. _____	6.
7. _____	7.
8. _____	8.
9. _____	9.
10. _____	10.

Construction: From the given line, cut off the *third* part.

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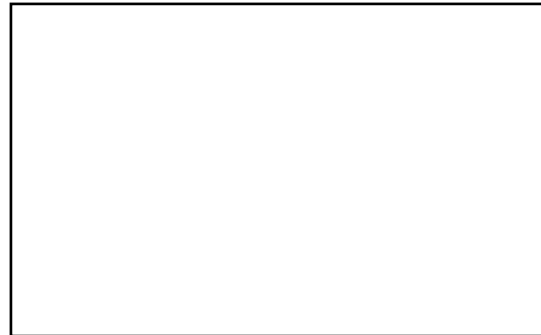
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**VI.11** : To two given straight lines to find a third proportional.

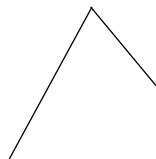
Given:



To Prove:

Statements	Reasons
1. _____	1.
2. _____	2.
3. _____	3.
4. _____	4.
5. _____	5.
6. _____	6.
7. _____	7.
8. _____	8.
9. _____	9.
10. _____	10.

Construction: To the given two lines, construct a third proportional.

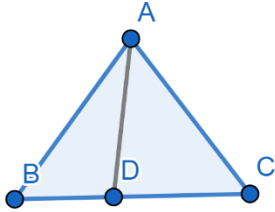


Bell Work 9

Bell Work 9: Proportions in Figures (with number!)

**Directions:** Using your knowledge of what proportions are true in each diagram, set up a proportion to find the missing length or area.

1.



Given two triangles ABD and ADC under the same height, with

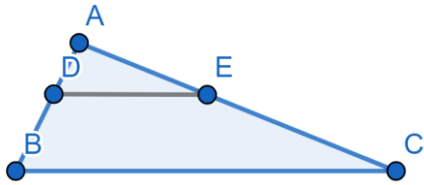
$$ABD = 6$$

$$ADC = 9$$

$$BD = 2$$

Find  $DC =$  \_\_\_\_\_

2.



Given triangle ABC, with  $DE \parallel BC$  and

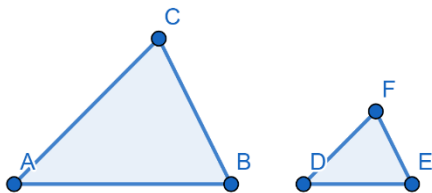
$$BD = 6$$

$$AD = 2$$

$$EC = 12$$

Find  $AE =$  \_\_\_\_\_

3.



Given similar triangles ABC and DEF, and

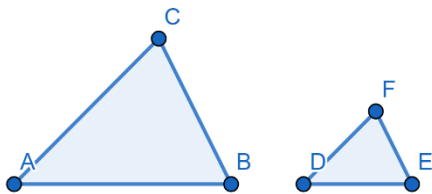
$$AC = 18$$

$$AB = 15$$

$$DF = 6$$

Find  $DE =$  \_\_\_\_\_

4.



Given similar triangles ABC and DEF, with

$$AB = 8$$

$$BC = 6$$

$$EF = 3$$

Find  $DE =$  \_\_\_\_\_

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**VI.12 :** *To three given straight lines to find a fourth proportional.*

Given:



To Prove:

Statements	Reasons
1. _____	1.
2. _____	2.
3. _____	3.
4. _____	4.
5. _____	5.
6. _____	6.
7. _____	7.
8. _____	8.
9. _____	9.
10. _____	10.

Construction: To the given three lines A, B, and C, construct a fourth proportional, such that  
 $A : B :: C : (\text{the line you construct})$ .

A \_\_\_\_\_

B \_\_\_\_\_

C \_\_\_\_\_

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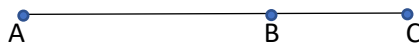
**VI.13** : To two given straight lines to find a mean proportional.

Given:

To Prove:

Statements	Reasons
1. _____	1.
2. _____	2.
3. _____	3.
4. _____	4.
5. _____	5.
6. _____	6.
7. _____	7.
8. _____	8.
9. _____	9.
10. _____	10.

Construction: To the two given straight lines, find a mean proportional (such that  $AB : \text{the constructed line} :: \text{the constructed line} : BC$ ).



Bell Work 10: Proportions in VI.8

**Part 1: For each proportion, fill in the missing line to make the proportion true by VI.8.**

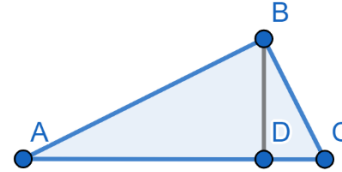
Given right triangle ABC, with right angle ABC and BD drawn

perpendicular to AC,

1)  $AB:AC :: AD: \underline{\hspace{2cm}}$

2)  $AB:BC :: BD: \underline{\hspace{2cm}}$

3)  $AD:BD :: BD: \underline{\hspace{2cm}}$

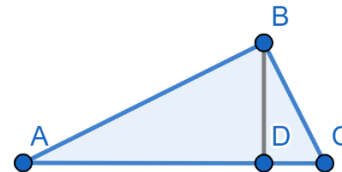


**Part Two: Notice how in #3 above, the proportion is a proportion in three terms, with BD being the mean proportional. In each of these following problems, find the length of BD.**

1) If  $AD = 4$  and  $DC = 1$ , then  $BD = \underline{\hspace{2cm}}$

2) If  $AD = 9$  and  $DC = 1$ , then  $BD = \underline{\hspace{2cm}}$

3) If  $DC = 4$  and  $AD = 16$ , then  $BD = \underline{\hspace{2cm}}$

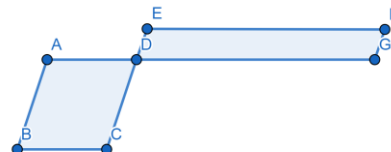


**Note on VI.16:**

Although I am calling this a note on VI.16, it is really more a note on VI.14, because VI.14 (which we skipped) is essential for understanding VI.16.

VI.14 says that “*In equal and equiangular parallelograms the sides about the equal angles are reciprocally proportional.*” (It also proves the converse of this.)

The given is fairly simple: there are two parallelograms that are equal in area, and they have all angles equal. We can imagine something like this:



The parallelograms ABCD and DEFG have all equal angles, and their areas are equal as well. If this is the case, says VI.14, then the sides are *reciprocally proportional*. This means that  $CD:DE :: DG:DA$ . Notice how, in this

proportion, we start the first ratio with CD, part of parallelogram ABCD, and move towards DE, part of the parallelogram DEFG. If this were a case of normal proportionality, the second ratio in the proportion would also start with a side of ABCD and move to a side of DEFG. But it does not! It starts with DG, a side of DEFG, and moves to AD, a side of ABCD. Because it the second ratio is in a “different direction” from the first, we call it “reciprocally proportional.”

You will see in VI.16, that this is used on two rectangles, and the “reciprocal” part—the reverse in direction—is very important.

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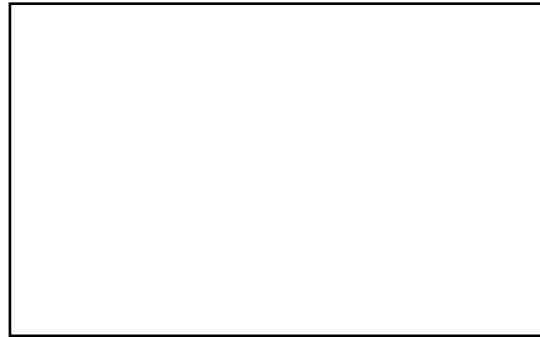
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**VI.16 (Part 1):** *If four straight lines be proportional, the rectangle contained by the extremes is equal to the rectangle contained by the means...*

Given:



To Prove:

Statements	Reasons
1. _____	1.
2. _____	2.
3. _____	3.
4. _____	4.
5. _____	5.
6. _____	6.
7. _____	7.
8. _____	8.
9. _____	9.
10. _____	10.
11. _____	11.
12. _____	12.
13. _____	13.
14. _____	14.
15. _____	15.
16. _____	16.
17. _____	17.
18. _____	18.
19. _____	19.
20. _____	20.

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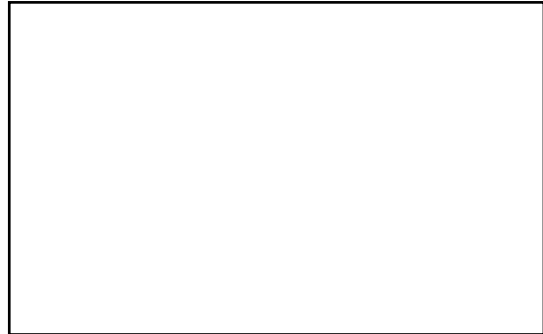
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**VI.16 (Part 2):** ...and, if the rectangle contained by the extremes be equal to the rectangle contained by the means, the four straight lines will be proportional.

Given:



To Prove:

Statements	Reasons
1. _____	1.
2. _____	2.
3. _____	3.
4. _____	4.
5. _____	5.
6. _____	6.
7. _____	7.
8. _____	8.
9. _____	9.
10. _____	10.
11. _____	11.
12. _____	12.
13. _____	13.
14. _____	14.
15. _____	15.
16. _____	16.
17. _____	17.
18. _____	18.
19. _____	19.
20. _____	20.

## Remote Learning Packet

Please submit scans of written work in Google Classroom at the end of the week.

### Week 7: May 11-15, 2020

**Course:** Humane Letters

**Teacher(s):** Mrs. Hunt ([natalie.hunt@greatheartsirving.org](mailto:natalie.hunt@greatheartsirving.org))

Mr. McKowen ([robert.mckowen@greatheartsirving.org](mailto:robert.mckowen@greatheartsirving.org))

Mr. Mercer ([andrew.mercer@greatheartsirving.org](mailto:andrew.mercer@greatheartsirving.org))

#### Weekly Plan:

Monday, May 11

Prepare for this week's seminar on Acts I and II of *The Tempest*

Tuesday, May 12

Humane Letters Seminar on Acts I and II of *The Tempest*

Wednesday, May 13

Read *America: A Narrative History* p. 1393-1413

Shakespeare writing assignment

Thursday, May 14

Read *America: A Narrative History* p. 1415-1435

Prepare for open-book history assessment next Thursday (date)

Review Acts III, IV, and V for a seminar on Tuesday.

Friday, May 15

attend office hours

catch-up or review the week's work

Submit this week's work on Google Classroom

#### 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

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Student Signature

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Parent Signature



## Monday, May 11

1. Prepare for tomorrow's seminar on Acts I and II of *The Tempest*:
  - a. Thorough preparation involves reviewing the book, gathering citations to read aloud, and answering the following questions. It may be helpful to read the question aloud and practice speaking your answer, or even to jot down a few notes for each question. You may expect cold calling for our seminars and given this virtual setting, your participation is imperative to a great conversation! Do not be shy to share your thoughts during our conversation; we are working together to come to the truth.
2. Analyze **Act 1.1 (Act 1, Scene 1)**.
  - a. Who is in charge on the ship during this literal tempest? What do some men think of the king and his son?
  - b. What is the tone of this scene?
3. Analyze **Act 1.2 (Act 1, Scene 2)**.
  - a. What does Miranda's opening lines reveal to the reader about her character? How does Prospero respond to her?
  - b. How is Prospero connected to this tempest? What does Prospero reveal about their life before the island?
  - c. Why does Prospero ask Ariel about the safety of those from the ship? How does Ariel view Prospero? Why is he eager to serve him?
  - d. Contrast Prospero's treatment of Ariel and Caliban. How do you imagine Caliban moving about on stage? What does his dialogue share about his character?
  - e. Consider Miranda and Caliban as students. How do they respond differently to education? See especially Caliban's retort to Miranda herself at **1.2.437-440**.
  - f. Contrast Miranda's response toward the suffering of the mariners and her response to Caliban. What new dimension does her history with Caliban add to her character?
  - g. Why does Ariel appear (invisibly) to Ferdinand and sing? What are the contents of his song? What themes are entwined in Ariel's song? What purpose does music serve in the play?
  - h. What is Prospero's odd reaction to the budding love between Miranda and Ferdinand?
  - i. Overall, what do we think of Prospero? Is there a connection to the latin meaning of his name (prosperus - doing well)?
  - j. This play unfolds on an unknown island. What is significant about islands and those who inhabit them? (Think, for instance, of Prospero and Miranda's long residency on the island).
4. Analyze **Act 2.1**
  - a. Who are the major figures we are introduced to in this scene and what are they like? Be able to cite specific evidence from the play.
  - b. Read closely Gonzalo's plan for governing the isle in **2.1.157-185**. What is Gonzalo's view of human nature? Sin? How does this image of governance compare to Prospero's actual

rule of the island? Do we agree or disagree with Antonio and Sebastian's mocking response?

c. Why do Antonio and Sebastian plot to kill the king? What does Ariel's intervention imply?

5. Analyze **Act 2.2**

a. This is a rather comedic scene and contains an unique set of stage directions. How is Caliban treated by others? Does he welcome this treatment?

b. What kind of men are Trinculo and Stephano? How do they compare as masters to Prospero?

## **Tuesday, May 12**

1. Come to today's mandatory Zoom seminar prepared to discuss Act I and II of *The Tempest*
  - a. See the google classroom "stream" for the link.

## **Wednesday, May 13**

1. Read *America: A Narrative History* p. 1393-1413.
2. Take notes on major points while reading.
3. Write a thoughtful 2 paragraph reflection on the first two acts of Shakespeare's *Tempest*. You may choose to further pursue a question that came up in yesterday's seminar, or take on a question from the list that we did not get to.

## **Thursday, May 14**

1. Read *America: A Narrative History* p. 1415-1435 (top of page).
2. Take notes on major points while reading.
3. Prepare for the seminar next Tuesday by reviewing Acts III, IV, and V

## **Friday, May 15**

1. Attend office hours
2. Catch-up or review the week's work
3. Submit your Shakespeare reflection by Sunday, May 17.

## Remote Learning Packet

Please submit scans of written work in Google Classroom at the end of the week.

### Week 7: May 11-15, 2020

**Course:** 9 Latin III

**Teacher:** Mr. Bascom john.bascom@greatheartsirving.org

**Supplemental Link:** [CLC Unit 4 Dictionary](#)

#### Weekly Plan:

Monday, May 11

Review for Stage 40 Assessment

Tuesday, May 12

Stage 40 Assessment

Wednesday, May 13

Read “Governing an empire”

Read *adventus* I

Answer questions 1-8.

Thursday, May 14

Read *adventus* II

Answer questions 1-4.

Read *The government of the Roman provinces*

Friday, May 15

attend office hours

catch-up or review the week’s work

#### 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

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Student Signature

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Parent Signature

## Monday, May 11

Review:

The Stage 40 assessment will be open-book and should take roughly the same amount of time as a normal day's assignment (30 minutes). To review for your Stage 40 assessment:

1. Look over the readings for the chapter, a short translation will be included as well as a few comprehension questions
2. Look over *about the language 1: indirect statement (concluded)*, there will be questions and translations based on this material. Below are my instructions for looking over *about the language 1: indirect statement (concluded)*, reviewing these instructions may be beneficial.
3. Look over *about the language 2: more about gerundives*, there will be questions and translations based on this material. Below are my instructions for looking over *about the language 2: more about gerundives*, reviewing these instructions may be beneficial.

### *About the language 1: indirect statement (concluded)*

1. Read over the sentences for #1. Notice that all the verbs of sense perception are in the **present tense**.
2. Read over the sentences for #2. Notice that the verbs of sense perception are in a **past tense** (imperfect or perfect).
3. Take your time looking at these sentences, noticing the tenses of the verbs (specifically the infinitives) and how they are translated.

**Notice:** in the first sentence of #2:

puer dixit custodem revenire.

*The boy said that the guard was returning.*

The main verb *dixit* is in the perfect tense and the infinitive, *revenire* is in the present tense. That infinitive, however, is translated 'was returning', which is a past tense translation.

Look at the second sentence: *recitaturam esse* is a future infinitive.

Look at the third sentence: *deletas esse* is a perfect infinitive

Notice the Rule:

In indirect statement:

- Present tense infinitives are contemporaneous with (happen at the same time as) the verb of sense perception (whether that verb is past, present, or future).
- Future tense infinitives happen in the future in relation to the verb of sense perception.
- Perfect tense infinitives happen in the past in relation to the verb of sense perception.

4. For #3, write out a translation of sentences c-j.

For the indirect statement sentences (d, f, h, j)

- Copy down the verb of sense perception and the infinitive
- Indicate the tense of each.

**Example:**

b. Translation: “the accusers affirmed that Salvius had committed many wicked (deeds).”

*affirmaverunt* : perfect tense

*commisisse* : perfect infinitive

**NOTE:** the translation ‘had committed’ indicates that the action of the infinitive verb took place further in the past than the action of ‘affirmaverunt’ (affirmed).

*About the language 2: more about gerundives.*

1. Read the examples and explanations carefully. Recall that we refer to these gerundives as the ‘gerundive of obligation’ because it is used to convey obligation:

- *I must tell the story*
- *Haterius should be praised*

**NOTE:** In order to better understand this strange construction, it may be helpful to recall that these ‘gerundives’ are in fact the future passive participle. If *narranda* and *laudandus* were translated literally on their own, they would mean something like ‘about to be told’ and ‘going to be praised’. They modify *fabula* and *Haterius* respectively and, when necessary, they use a dative of agent: *mihi* in the first sentence, there is no agent in the second.

2. Here the ‘Gerundive of purpose’ is introduced. read the explanation and examples carefully. Notice in the literal translations of each of the sentences that you can almost see that the Gerundive of Purpose is a future passive participle. Notice also that the Gerundive of Purpose agrees with its ‘object’ : *accussandum - Salvium* ; *reficiendam - navem*.

3. For sentences a-e :

- a. copy down the Gerundive of Purpose phrase from each. This phrase must include  
1) the preposition ‘ad’ which introduces it 2) the noun ‘object’ of the gerundive 3) the gerundive itself

Ex. 1. ad Salvium accusandum (ad = 1 ; Salvium = 2, accusandum = 3)

Ex. 2. ad navem reficiendam

- b. Translate the entire sentence for each. You may translate either literally or more naturally. If you feel that you have a decent understanding of the construction, I would recommend the second, more natural translation style.

## **Tuesday, May 12**

Take the Stage 40 assessment on google classroom under the Topic of Packet Week 7.

## **Wednesday, May 13**

Ah my dear students, though we have come to it later than I would have liked and are unable to enjoy reading these passages together, we have finally moved fully into primary source Latin texts. Our first text is a series of letters exchanged between Pliny and Emperor Trajan.

1. Read “Governing an empire” page 100, note the map below, you will be able to trace the stages of Pliny’s voyage on this map.
2. Read *adventus* I and answer questions 1-8.

## **Thursday, May 14**

1. Read *adventus* II and answer questions 1-4.
2. Read *The government of the Roman provinces*, pages 117-121.

## **Friday, May 15**

Catch up on the week’s work and attend office hours if you wish.

## Remote Learning Packet - Week 7

**May 11-May 15, 2020**

**Course:** Music

**Teacher(s):** Mr. Zuno [leonardo.zunofernandez@greatheartsirving.org](mailto:leonardo.zunofernandez@greatheartsirving.org)

### **Weekly Plan:**

On Week 6, you learned about characteristics of the Romantic Style. To help you with your final assessment, this week we will review style features of Baroque and Classical period music, as well as learn about composers from these periods. You will listen to some of their important works and will select one composer from each period to write about in your final assessment.

Make sure you are taking thorough notes and keep your summaries and listening logs, as these will be valuable for the final assessment.

*Monday, May 11*

Read Style Features of the Baroque Period

**To turn in:** Please answer these questions using full sentences and listen to the following examples below. *The videos are optional, but recommended.*

<https://www.youtube.com/watch?v=djmhKxt9Fxl>

<https://www.youtube.com/watch?v=bUIIEMpRNxI>

<https://www.youtube.com/watch?v=7YaGwI7GjIA>

-How did the Baroque Recitative become more popular than the high Renaissance Madrigal? (p. 83)

-How did instruments start to act like choir voices? How did this add to the "pomp" and "magnificence" of the Baroque style? (p. 84)

-How did the concept of rhythm become more prominent in Baroque music? (p. 86)

*Tuesday, May 12*

Listen to one of the links posted on Google Classroom. As you listen, you may read and answer the questions below regarding Antonio Vivaldi and his Violin Concerto in G, Op. 4, No. 12, 2nd movement. Here is a link to this movement: *(The video is optional, but recommended.)*

<https://www.youtube.com/watch?v=2vEOc8lvS-k>

**To turn in:** Please answer these questions using full sentences.

-Why was Vivaldi called the "Red Priest," and where did he work? What was his job there? (p. 124)

-What was Vivaldi's main instrument, and why is this important for the type of music that he composed? (p. 124)

-From today's recording, do you feel a steady beat? Does the violin have a prominent place in this piece, or does it have a supporting role?

*Wednesday, May 13*

As you listen to the links below, you may read and answer these questions regarding J.S. Bach and G.F. Handel. *The videos are optional, but recommended.*

\*J.S. Bach

Listen to the first movement of J.S. Bach's Violin Concerto in A minor: (from 0:00-3:07 only)

<https://www.youtube.com/watch?v=A4bUCMV2oCE>

\*G.F. Handel

Listen to this example of Handel's "Water Music"

<https://www.youtube.com/watch?v=foacRsak3cQ&list=TLPQMDYwNTIwMjBoUwjlFP4eg&index=27>

If time allows, also listen to this sample from "The Messiah"

<https://www.youtube.com/watch?v=kVB5r-ui-C8>

**To turn in:** Please answer these questions using full sentences.

-Did J.S. Bach hold more than one job at a time? How did he make a living? (p. 130)

-Would you say that J.S. Bach's family was a family of composers? How many children did he have, and of those, how many were composers? (p. 130)

-What are some examples of musical works that Handel composed, and for whom did he write some of his music? (p. 145)

-What are your impressions from these samples of beautiful Baroque music? Note the different purposes (instrumental concert music, sacred vocal music, etc.)

*Thursday, May 14*

**To turn in:** This week, you had a large amount of reading, so please go back through these readings and write a 6-sentence reflection on items you may have missed, or topics that you more fully understand after reading this a second time. You may include 2 sentences from each day's readings. Also, please re-play the music from Monday-Wednesday while you read to become better acquainted with music from this style.

In Google Classroom, look for a video where I explain the final assessment. More details will come to you next week.

Also, please review the biographies of Mozart, Haydn, and Beethoven, which were covered on Week 5.

**\*A note about the final assessment:**

During Week 8, you will be given specific directions about the final assessment. Your final assessment will include listening to a concert with a variety of classical music or a variety of musical selections, and you will write a paper about it. You will be expected to use the terminology provided in the weekly handouts. In the meantime, try to get good-quality notes and a strong listening log.

*If you already turned in your concert review, you will still be expected to do all of these assignments, and your final project will be somewhat reduced.*

To have a better idea of which composers belong to each of these periods, please refer to this useful [timeline](#) (composers' names are represented by green lines).

The final paper will include:

-One major work from the Baroque period. (Vivaldi through Handel)

-One major work from the Classical period. (C.P.E. Bach through Carl Maria von Weber)

-One major work from the Romantic, Late Romantic period.



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## CHAPTER 8

# The Early Baroque Period

In the years around 1600, music underwent rapid changes at the sophisticated courts and churches of northern Italy. Composers began to write motets, madrigals, and other pieces more directly for effect—with a new simplicity, but also with the use of exciting new resources. A new style, the style of the early Baroque period, took hold all over Italy and in most of the rest of Europe.

### 1 From Renaissance to Baroque

The madrigal, we saw in Chapter 7, was the most “advanced” form in late Renaissance music. Toward the end of the sixteenth century, the search for expression led madrigal composers to increasingly extreme—even weird—kinds of word painting. Previously taboo dissonances and rhythmic contrasts were explored to illustrate emotional texts in a more and more exaggerated fashion. The fluid High Renaissance style broke down.

At the same time, a reaction set in *against* the madrigal. In Florence, an influential group of intellectuals mounted an attack on the madrigalists’ favorite technique, word painting. Word painting was artificial and childish, they said, and the many voices of a madrigal ensemble could not focus feeling or express it strongly.

True emotionality could be projected only by a single human agent, an individual, a singer who would learn from great actors how to move an audience to laughter, anger, or tears. A new style of solo singing was developed, *recitative*, that aimed to join features of music and speech. This led inevitably to the stage and, as we shall see, to opera. Invented in Florence around 1600, opera became one of the greatest and most characteristic products of the Baroque imagination.

#### Music in Venice

Meanwhile, there were important developments in Venice, the city of canals. The “Most Serene Republic,” as Venice called itself, cultivated especially brilliant styles in all the arts—matched, it seems, to the city’s dazzling physical beauty.

“Why cause words to be sung by four or five voices so that they cannot be distinguished, when the ancient Greeks aroused the strongest passions by means of a single voice supported by a lyre? We must renounce counterpoint and the use of different kinds of instruments and return to simplicity!”

*A Florentine critic, 1581*



Venice, the most colorful of European cities, and one of the most musical. Several major painters made a speciality of Venetian scenes, which were very popular; this one, of an aquatic fete across from the central square, the Piazza San Marco, is by Canaletto (1697–1768).

Wealthy and cosmopolitan, Venice produced architects whose flamboyant, varied buildings were built of multicolored materials, and painters—the Bellinis, Titian, Tintoretto—who specialized in warm, rich hues. Perhaps, then, it is more than a play on words to describe Venetian music as “colorful.”

From the time of Palestrina’s *Pope Marcellus* Mass (see page 75), composers of the sixteenth-century had often divided their choirs into low and high groups of three or four voice parts each. These semichoires would alternate and answer or echo each other. Expanding this technique, Venetian composers would now alternate two, three, or more whole choirs. Homophony crowded out counterpoint as full choirs answered one another stereophonically, seeming to compete throughout entire motets and Masses, then joining together for climactic sections of glorious massed sound.

The sonic resources were enriched even further when the choirs were designated for singers on some parts and instruments on others. Or else whole choirs would be made up of instruments. As the sonorous combinations of Venetian music grew more and more colorful, the stately decorum of the High Renaissance style was forgotten (or left to musical conservatives). Magnificence and extravagance became the new ideals, well suited to the pomp and ceremony for which Venice was famous. And as Venice became the tourist center of Europe, its distinctive music proved to be one of its big attractions.

## Extravagance and Control

Wherever they looked, knowledgeable travelers to Italy around 1600 would have seen music bursting out of its traditional forms, styles, and genres. Freedom was the order of the day. But they might have been puzzled to notice an opposite tendency as well: In some ways musical form was becoming more rigorously controlled and systematic. As composers sought to make music more untrammelled in one respect, it seems they found they had to organize it more strictly in another. Listeners could not be allowed to lose track of what was happening.

The clarity and control composers exercised over Baroque form, in other words, was an appropriate response to Baroque extravagance and emotionality of expression.

### GIOVANNI GABRIELI (c. 1555–1612) Motet, “O magnum mysterium”



The most important composers in Venice were two Gabrielis, Andrea (c. 1510–1586) and his nephew Giovanni. As organists of St. Mark’s Basilica, the cathedral of Venice, both of them exploited the special acoustics of that extraordinary building, which still impress tourists today. By placing choirs of singers and instrumentalists in some of St. Mark’s many different choir lofts, they obtained brilliant echo effects that even modern audio equipment cannot duplicate.

Giovanni’s “O magnum mysterium,” part of a larger motet, was written for the Christmas season. The words marvel that lowly animals—the ox and the ass—were the first to see the newborn Jesus. This naive, touching text made “O magnum mysterium” a favorite for motet settings at the time; there are lovely versions by Victoria and William Byrd.

Gabrieli’s music marvels along with the text. In the manner of a madrigal, the exclamation *O* is repeated like a gasp of astonishment. Then lush chord progressions positively make the head spin, as the words *O magnum mysterium* are repeated to the same music, but pitched higher (that is to say, in sequence—see page 53).

Gabrieli uses two choirs, each with three voice parts and four instrumental parts, plus organ, though at first all we hear is a sumptuous blend of brass instruments and voices in a mainly homophonic texture. A more polyphonic texture emerges for the first time at the word *sacramentum*. Solo voices, first tenors, then boy sopranos, imitate one another during the line *iacentem in presepio*. Their motive is finally taken up by the brass.

Gabrieli unleashes his musical resources in a big way at the choral “Alleluia” section. The music moves in quick triple meter, matching the jubilation of repeated *alleluias*, and the choirs echo back and forth across the sound space:

	FAST—triple meter	SLOW—duple meter
	1 2 3   1 2 3   1 2 3   1 2 3   1 2 3   1 2 3   1 2 3   1 2 3   1 2 3   1 2 3 4   1 2 3 4   1	
CHOIR 1	Al-le- lu-ia, al-le-lu-ia;	al-le-lu-ia, al-le-lu-ia: [ Al -- le- lu----- ia
CHOIR 2	Al-le- lu-ia, al-le-lu-ia,	al-le-lu-ia, [ Al -- le- lu----- ia

To make a grand conclusion, the two choirs come together again. There is another wash of voice-and-brass sonority as the tempo slows and the meter changes to duple for a climactic *alleluia*. And for still more emphasis, Gabrieli

“Sometimes there sung 16 or 20 men together, having their master or moderator to keep them in order, and when they sung the instrumental musicians played also. Sometimes 16 played together: 10 sagbuts, 4 cornets, and 2 violdegamboes of an extraordinary greatness, sometimes 2, a cornet and a treble viol . . .”

*Venetian music in 1611, as reported by an English tourist*

**sagbut:** an early trombone

**cornet:** a woodwind instrument played with a trumpet mouthpiece

**viola da gamba:** a cello-like instrument; see the picture on page 125

**LISTEN**

## Gabrieli, “O magnum mysterium”



0:00	O magnum mysterium,	O, what a great mystery,
0:29	et admirabile sacramentum	and what a wonderful sacrament—
0:51	ut animalia viderunt Dominum natum	that animals should see the Lord new born
1:16	iacentem in presepio:	lying in the manger.
1:51	Alleluia, alleluia.	Hallelujah, hallelujah.

repeats the entire “Alleluia” section, both the fast triple-time alternations and the massive slow ending. This kind of clear sectional repetition shows one way Baroque composers worked to impose clarity and control on flamboyant chords and the solo rhapsodies.

## 2 Style Features of Early Baroque Music

Music from the period of approximately 1600 to 1750 is usually referred to as *baroque*, a term that captures its excess and extravagance. (It was originally a jeweler’s term for large pearls of irregular shape.) A number of broad stylistic features unify the music of this long period.

### Rhythm and Meter

Rhythms become more definite, regular, and insistent in Baroque music; a single rhythm or similar rhythms can be heard throughout a piece or a major segment of a piece. Compare the subtle, floating rhythms of Renaissance music, changing section by section as the motives for the imitative polyphony change. (Renaissance dance music is an exception, and in the area of dance music there is a direct line from the Renaissance to the Baroque.)

Related to this new regularity of rhythm is a new emphasis on meter. One technical feature tells the story: Bar lines begin to be used for the first time in music history. This means that music’s meter is systematically in evidence, rather than being downplayed as it was in the Renaissance. (Full disclosure: For ease of reading, we have added bar lines to our examples in Chapters 6 and 7, but there are no bar lines in the original music.) The strong beats are often also emphasized by certain instruments, playing in a clear, decisive way. All this is conspicuous in Gabrieli’s motet “O magnum mysterium.”

### Texture: Basso Continuo

Some early Baroque music is homophonic and some is polyphonic, but both textures are enriched by a feature unique to the period, the **basso continuo**.

As in Renaissance music, in Baroque music the bass line is performed by bass voices or low instruments such as cellos or bassoons. But the bass part in Baroque music is also played by an organ, harpsichord, or other chord instrument. This instrument not only reinforces the bass line but also adds chords continuously (hence the term *continuo*) to go with it. The basso continuo—or just continuo—has the double effect of clarifying the harmony and making the texture bind or jell.

One can see how this device responds to the growing reliance of Baroque music on harmony (already clear from Gabrieli’s motet). Originally, the continuo was simply the bass line of the polyphony reinforced by chords; but later the continuo with its chords was mapped out first, and the polyphony above adjusted to it. Baroque polyphony, in other words, has systematic harmonic underpinnings.

“Music is a roaring-meg against melancholy, to rear and revive the languishing soul; affecting not only the ears, but the very arteries, the vital and animal spirits, it erects the mind and makes it nimble.”

*Oxford scholar Robert Burton, 1621*

This fact is dramatized by a musical form that is characteristically Baroque, the **ground bass**. This is music constructed from the bottom up. In ground-bass form, the bass instruments play a single short melody many times, generating the same set of repeated harmonies above it (played by the continuo chord instruments). Over this ground bass, upper instruments or voices play (or improvise) different melodies or virtuoso passages, all adjusted to the harmonies determined by the bass.

Baroque ground-bass compositions discussed in this book are “Dido’s Lament” from the opera *Dido and Aeneas* by Henry Purcell (page 92), a passacaglia by Girolamo Frescobaldi (page 96), and Vivaldi’s Violin Concerto in G, Op. 4, No. 12 (page 122).

Another name for the ground bass comes from Baroque Italian musicians: **basso ostinato**, meaning “persistent” or “obstinate” bass. By extension, the term *ostinato* is also used to refer to any short musical gesture repeated over and over again, in the bass or anywhere else, especially one used as a building block for a piece of music. Ostinatos are found in most of the world’s musical traditions (see page 98). This is not surprising, since the formal principle they embody is so very fundamental: Set up a repeating pattern and then pit contrasting musical elements against it.

## Functional Harmony

Inevitably, in view of these new techniques, the art of harmony evolved rapidly at this time. Whereas Renaissance music had still used the medieval modes, although with important modifications, Baroque musicians developed the modern major/minor system, which we discussed on pages 35–37. Chords became standardized, and the sense of tonality—the feeling of centrality around a tonic or home pitch—grew much stronger.

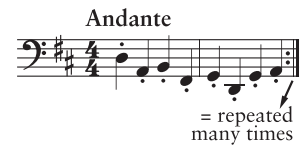
Composers also developed a new way of handling the chords so that their interrelation was felt to be more logical, or at least more coherent. Each chord now assumed a special role, or function, in relation to the tonic chord (the chord on the home pitch). Thus when one chord follows another in Baroque music, it does so in a newly predictable and purposeful way. **Functional harmony**, in this sense, could also be used as a way of organizing large-scale pieces of music, as we will see later.

In a Baroque composition, as compared with one from the Renaissance, the chords seem to be going where we expect them to—and we feel they are determining the sense or the direction of the piece as a whole. Harmonies no longer seem to wander, detour, hesitate, or evaporate. With the introduction of the important resource of functional harmony, Baroque music brings us firmly to the familiar, to the threshold of modern music.

## 3 Opera

**Opera**—drama presented in music, with the characters singing instead of speaking—is often called the most characteristic art form of the Baroque period. Baroque opera combined many different arts: not only music, drama, and poetry but also dancing, highly elaborate scene design, and spectacular special effects. Ingenious machines were contrived to portray gods descending to earth, shipwrecks, volcanos, and all kinds of natural and supernatural phenomena. Scene designers often received top billing, ahead of the composers.

A ground bass  
(the Pachelbel Canon)



## Antonio Vivaldi (1678–1741)

The son of a Venetian violinist, Antonio Vivaldi was destined to follow in his father's footsteps. He entered the priesthood—where his bright red hair earned him the nickname of the “Red Priest”—and in 1703 became a music teacher at the Seminario Musicale dell’Ospedale della Pietà, a Venetian orphanage for girls. The Ospedale was one of several such institutions in Venice that were famous for the attention they paid to the musical training of their students. A large proportion of Vivaldi's works were composed for the school, whose concerts were a great tourist attraction.

The Ospedale allowed him frequent leaves of absence, so Vivaldi toured a good deal, but the composer's contract specified that he should write two concertos a month for the pupils and rehearse them if he was in town. Near the end of his life, Vivaldi left Venice permanently to settle in Vienna.

Internationally renowned as a virtuoso violinist, Vivaldi is remembered today chiefly for his brilliant concertos. He wrote more than four

hundred of these, including concertos for harp, mandolin, bassoon, and various instrumental combinations; we know of more than 250 solo violin concertos, including our Concerto in G from *La stravaganza*. Critics of the day complained that Vivaldi's music was thin and flashy and that the composer was always playing for cheap effects. But the young Bach, before writing his *Brandenburg* Concertos, carefully copied out pieces by Vivaldi as a way of learning how to write concertos himself.

Vivaldi's most famous work—it has been recorded over a hundred times—is also one of his most unusual: *The Four Seasons*, a set of four violin concertos that illustrate, in one way or another, spring (bird songs, gentle breezes, and so on), summer (a nap in the sun), fall (a tipsy peasant dance at a harvest festival), and winter (“the horrible wind,” says the score). Baroque composers were fond of musical illustration, especially with the words of vocal music, as we shall see; but they seldom pursued it this far.

**Chief Works:** Solo concertos for many different instruments, including the very famous *Four Seasons* ■ Concerti grossi for various instruments ■ 21 extant operas; oratorios; cantatas

**Encore:** After the Violin Concerto in G, listen to *The Four Seasons*; Concerto for Two Violins in A Minor, Op. 3, No. 8.



That theme may be a complete melody in the soprano range or a shorter melodic phrase in the bass. Given the emphasis in the Baroque era on the basso continuo (see page 86), it is not surprising that Baroque variations tend to occur above repeating bass patterns. A name for such patterns is **basso ostinato**, meaning “persistent” or “obstinate” bass. Sometimes the bass itself is slightly varied—though never in such a way as to hide its identity. Dynamics, tone color, and some harmonies are often changed in variations. Tempo, key, and mode are changed less often.

There are a number of names for compositions in variation form, which grew up independently all over Europe, first as improvisations—opportunities for impromptu display on various instruments—and then as written-out compositions. Besides the French *chaconne* and the Italian *passacaglia* (*pah-sa-cáhl-ya*), there was the English term *ground* (the repeating bass figure being called the **ground bass**). One seventeenth-century Italian composer, Girolamo Frescobaldi, left a *passacaglia* for organ with exactly a hundred variations. More compact examples of variation form sometimes appear as one movement in a larger Baroque genre, such as a concerto.\*

\*We examine earlier examples of variation (ground bass) form on pages 92 and 96: “Dido's Lament” from *Dido and Aeneas* by Henry Purcell and a *passacaglia*—with 18, not 100 variations—by Frescobaldi.



As this child appears to be finding out, music lessons can often serve as a cover for lessons in something else—a fact that helps explain the enduring popularity of music lesson pictures.

The term *ostinato* has come to be used more broadly than just for repeating Baroque bass lines. It can refer to any short musical unit repeated many times, in the bass or anywhere else, especially one used as a building block for a piece of music. Ostinatos are by no means unique to European music; in some form they are found in almost all musical traditions (see, for example, pages 98 and 206).

## ANTONIO VIVALDI

### Violin Concerto in G, *La stravaganza*, Op. 4, No. 12 (1712–1713)



25–26

4

**Second Movement** (Largo) As is typical, Vivaldi's Concerto in G has three contrasting movements—the first vigorous and brilliant, the second gentle and slow. This slow movement is in ground bass variation form.

Our first impression of this music is probably of its texture and timbre—the gentle throbbing, the ingenious weaving in and out of the orchestral violins and the solo violin, and the delicate, subsidiary continuo sounds. There is, however, not much melody to listen to in the violin's music. There is less, in fact, as the movement goes along and the texture changes.

Sooner or later we notice that the only real melody is in the bass, where a solemn, quiet theme (the ground bass) is heard repeatedly in the cellos and bass viol. The theme sinks down and down, ending with a strong cadence:

Theme, Variations 1–4, 7



Variations 5–6



## LISTENING CHART 4



## Vivaldi, Violin Concerto in G, second movement

Variation (ground bass) form. 2 min., 59 sec.

0:00	Theme	Orchestra and Solo: descending bass
0:22	Var. 1	Solo: Flowing material
0:41	Var. 2	Faster flowing material
1:03	Var. 3	Even faster music, though now in spurts
1:23	Var. 4	Faster yet: rapid figuration
		<b>CADENCE</b> Brief stop at the cadence ending Variation 4
1:44	Var. 5	Thin texture (organ and lute drop out), with expressive violin material over a varied bass: in the minor mode
2:04	Var. 6	Like Variation 5, but the violin is a little faster and more expressive.
2:26	Theme	Orchestra and Solo: as at the beginning (i.e., back to the major mode, and the continuo returns)



▶ Access Interactive Listening Chart 4 at [bedfordstmartins.com/listen](http://bedfordstmartins.com/listen)

We develop a sort of double listening for music like this, listening simultaneously to the unchanging theme and to the changing material presented above that theme. (This is a little like taking in a distant view while noticing someone in the foreground.) After the theme's initial statement, four more statements with violin variations follow, during which the solo violin plays faster and faster material above the unvaried ground bass. In its quiet way, this movement is showing off the violinist's ability to play music that is fast and sleek.

After Variation 4, however, there is a marked stop. Variation 5 makes a grand contrast of the kind relished by Baroque composers and audiences. The continuo stops, and since the texture is now thin and ethereal, the ground bass (played by the orchestra violins) can be heard more clearly—and what we hear is that the theme itself has been varied. It is now in the minor mode.

The mood becomes muted and melancholy; the violin is now showing off not its speed, but its expressive capabilities. The mood deepens in Variation 6. Rather abruptly, after this, the original theme returns in the full orchestra and continuo, played just as it was at the beginning, to end the movement.

The construction of this movement as a set of variations over a ground bass exemplifies the thorough, methodical quality of so much Baroque music. The effect of the contrast that Vivaldi has added with Variations 5 and 6 is not diminished by the steadily repeating, even obsessive bass. On the contrary, double listening can make the contrast seem richer and more interesting.

**Third Movement (Allegro)** Like the first movement, the third movement of the Concerto in G is a fast one in ritornello form. This time ritornello form is treated much more freely—or, as Vivaldi might have said, “extravagantly.”

Vivaldi begins with a long solo passage for the violin—and when the orchestra finally breaks in, all it can offer by way of a ritornello is a sort of hasty fanfare, interrupted by a short solo. The second ritornello is a much longer, very spirited passage of new music. Extravagant features of this movement would include the eviction of the orchestra from its customary place at

LISTEN

**VIVALDI**  
Violin  
Concerto  
in G, third  
movement

0:00 Introduction solo  
0:16 Ritornello 1 interrupted by solo  
0:30 Solo  
1:15 Ritornello 2  
2:08 Ritornello 3  
2:53 Ritornello 4  
3:46 Ritornello 5



the beginning; the fact that the lively second ritornello has nothing whatsoever to do with the official ritornello, namely the fanfare; and the way the solo violin keeps darting around and changing the kind of virtuoso material it plays throughout the movement.

However, order is asserted when the third ritornello takes the original fanfare as its point of departure (in the minor mode). And the final ritornello returns to its origins almost literally, as in the first movement.

## JOHANN SEBASTIAN BACH

### *Brandenburg* Concerto No. 5, for Flute, Violin, Harpsichord, and Orchestra (before 1721)



A concerto grosso is a concerto for a group of several solo instruments (rather than just a single one) and orchestra. In 1721 Johann Sebastian Bach sent a beautiful manuscript containing six of these works to the margrave of Brandenburg, a minor nobleman with a paper title—the duchy of Brandenburg had recently been merged into the kingdom of Prussia, Europe’s fastest-growing state. We do not know why this music was sent (if Bach was job-hunting, he was unsuccessful) or if it was ever performed in Brandenburg.

To impress the margrave, presumably, Bach sent pieces with six different combinations of instruments, combinations that in some cases were never used before or after. Taken as a group, the *Brandenburg* Concertos present an unsurpassed anthology of dazzling tone colors and imaginative treatments of the concerto contrast between soloists and orchestra.

*Brandenburg* Concerto No. 5 features as its solo group a flute, violin, and harpsichord. The orchestra is the basic Baroque string orchestra (see page 113). The harpsichordist of the solo group doubles as the player of the orchestra’s continuo chords, and the solo violin leads the orchestra during the ritornellos.

**First Movement** (Allegro) In ritornello form, the first movement of *Brandenburg* Concerto No. 5 opens with a loud, bright, solid-sounding orchestral ritornello. We have seen this music before, as an example of a typical Baroque melody—intricate, wide-ranging, and saturated with sequences (see page 114). The brackets show the three segments of the ritornello, **a**, **b**, and **c**, that recur in the movement:

Once the ritornello ends with a solid cadence, the three solo instruments enter with rapid imitative polyphony. They dominate the rest of the movement. They introduce new motives and new patterns of figuration, take over some motives from the ritornello, and toss all these musical ideas back and forth between them. Every so often, the orchestra breaks in again, always with clear

“I Shall

1. set the boys a shining example of an honest, retiring manner of life, serve the School industriously, and instruct the boys conscientiously
2. Bring the music in both the principal Churches of this town [Leipzig] into a good state, to the best of my ability
3. Show to the Honorable and Most Wise Town Council all proper respect and obedience.”

*Bach's contract at Leipzig, 1723—the first three of fourteen stipulations*

## Johann Sebastian Bach (1685–1750)

During the Baroque era, crafts were handed down in family clans, and in music the Bach clan was one of the biggest, providing the region of Thuringia in central Germany with musicians for many generations. Most of the Bachs were lowly town musicians or Lutheran church organists; only a few of them gained court positions. Johann Sebastian, who was himself taught by several of his relatives, trained four sons who became leading composers of the next generation.

Before he was twenty, Bach took his first position as a church organist in a little town called Arnstadt, then moved to a bigger town called Mühlhausen. Then he worked his way up to a court position with the Duke of Weimar. As a church organist, Bach had to compose organ music and sacred choral pieces, and at Weimar he was still required to write church music for the ducal chapel as well as sonatas and concertos for performance in the palace. The way his Weimar position terminated tells us something about the working conditions of court musicians. When Bach tried to leave Weimar for another court, Cöthen, the duke balked and threw him in jail for several weeks before letting him go. At Cöthen the prince happened to be a keen amateur musician who was not in favor of elaborate church music, so Bach concentrated on instrumental music.

In 1723 Bach was appointed cantor of St. Thomas's Church in Leipzig, a center of Lutheran church music in Germany. He had to not only compose and perform but also organize music for all four churches in town. Teaching in the choir school was another of his responsibilities. Almost every week in his first years at Leipzig, Bach composed, had copied, rehearsed, and performed a new cantata—a religious work for soloists, choir, and orchestra containing several movements and lasting from fifteen to thirty minutes.

Bach chafed under bureaucratic restrictions and political decisions by town and church authorities. The truth is, he was never appreciated in Leipzig. Furthermore, at the end of his life he was regarded as old-fashioned by modern musicians, and one critic pained Bach by saying so in print. Indeed, after Bach's death his music was neglected by the musical public at large, though it was admired by composers such as Mozart and Beethoven.

Bach had twenty children—seven with his first wife (a cousin) and thirteen with his second (a singer), for

whom he prepared a little home-music anthology, *The Note-Book of Anna Magdalena Bach*. The children were taught music as a matter of course, and also taught how to copy music; the performance parts of many of the weekly cantatas that Bach composed are written in their hands. From his musical response to the sacred words of these cantatas and from other works, it is clear that Bach thought deeply about religious matters. Works such as his Passions and his Mass in B Minor emanate a spirituality that many listeners find unmatched by any other composer.

Bach seldom traveled, except to consult on organ construction contracts (for which the fee was often a cord of wood or a barrel of wine). Blind in his last years, he continued to compose by dictation. He had already begun to assemble his compositions in orderly sets: organ chorale preludes, organ fugues, preludes and fugues for harpsichord. He also clearly set out to produce works that would summarize his final thoughts about Baroque forms and genres; such works are the Mass in B Minor, the thirty-three *Goldberg Variations* for harpsichord, and *The Art of Fugue*, an exemplary collection of fugues all on the same subject, left unfinished at his death. Bach was writing for himself, for his small devoted circle of students, perhaps for posterity. It is a concept that would have greatly surprised the craftsmen musicians who were his forebears.

**Chief Works:** More than 200 sacred and secular cantatas; two Passions, with words from the gospels of St. Matthew and St. John; Mass in B Minor ■ *The Well-Tempered Clavier*, consisting of 48 preludes and fugues in all major and minor keys for harpsichord or clavichord ■ Three sets of suites (six each) for harpsichord—the French and English Suites and the Partitas; solo cello suites; violin sonatas; *Goldberg Variations* ■ Organ fugues and chorale preludes ■ *Brandenburg Concertos*, other concertos, orchestral suites, sonatas ■ Late composite works: *A Musical Offering* and *The Art of Fugue* ■ Chorale (hymn) harmonizations

**Encore:** After *Brandenburg Concerto No. 5*, listen to the Concerto for Two Violins; Mass in B Minor (Gloria section).



The Prelude in C Major from *The Well-Tempered Clavier*, Book 1—in Bach's own musical handwriting, beautiful and intricate

and arias. On the other hand, it also makes much use of the chorus—a major difference from Italian opera of the time, where the chorus played little role.

Unlike most other religious genres, an oratorio was not actually part of a church service. Indeed, in opera-crazed Italy, the oratorio was prized as an entertainment substituting for opera during Lent, a somber season of abstinence from opera as well as other worldly diversions.

In England also, the oratorio substituted for opera, though in a different sense. Thanks largely to Handel, Italian opera became very popular in London for a quarter of a century, but finally audiences tired of it. At that point, Handel, already in his mid-fifties, began composing oratorios, and these turned out to be even more popular, the pinnacle of his long career.

## George Frideric Handel (1685–1759)

**G**eorg Friedrich Händel—he anglicized his name to George Frideric Handel after settling in England—was one of the few composers of early days who did not come from a family of musicians. His father was a barber-surgeon and a valet at a court near Leipzig. He disapproved of music, and the boy is said to have studied music secretly at night, by candlelight. In deference to his father's wishes, Handel studied law for a year at Halle, one of Germany's major universities, before finally joining the orchestra at Hamburg, Germany's leading center of opera.

From then on, it was an exciting, glamorous life. Still in his teens, Handel fought a duel with another Hamburg musician about which of them was to get top billing. In 1706 he journeyed to the homeland of opera and scored big successes in Venice, Florence, and Rome. Though he became a court musician for the elector of Hanover, in northern Germany, he kept requesting (and extending) leaves to pursue his career in London, a city that was then beginning to rival Paris as the world capital.

Here Handel continued to produce Italian operas, again with great success. He also wrote a flattering birthday ode for Queen Anne and some big pieces to celebrate a major peace treaty; for this he was awarded an annuity. In 1717, after the elector of Hanover had become George I of England, Handel got back into his good graces by composing music to be played in a royal celebration on barges on the River Thames. This famous *Water Music* consists of two suites for the Baroque festive orchestra.

As an opera composer, Handel had learned to gauge the taste of the public and also to flatter singers, writing music for them that showed off their voices to the best advantage. He now became an opera impresario—today we would call him a promoter—recruiting singers and negotiating their contracts, planning whole seasons of opera, and all the while composing the main attractions himself: an opera every year, on average, in the 1720s

and 1730s. He also had to deal with backers—English aristocrats and wealthy merchants who supported his opera companies and persuaded their friends to take out subscriptions for boxes.

Handel made and lost several fortunes, but he always landed on his feet, even when Italian opera went out of style in Britain, for he never lost a feel for his audience. After opera had failed, he popularized oratorios—retellings of Bible stories (mostly from the Old Testament) in a half operatic, half choral form. Opera audiences had always been ready to identify opera's virtuous Roman emperors with local princes. Now they were delighted to identify oratorio's virtuous People of Israel with the British nation.

Handel was a big, vigorous man, hot-tempered but quick to forgive, humorous and resourceful. When a particularly temperamental prima donna had a tantrum, he calmed her down by threatening to throw her out the window. At the end of his life he became blind—the same surgeon operated (unsuccessfully) on both him and Bach—but he continued to play the organ brilliantly and composed by dictating to a secretary.

**Chief Works:** 40 Italian operas, including *Giulio Cesare* (Julius Caesar) ■ Near-operatic works in English: *Semele* and *Acis and Galatea* ■ Oratorios, including *Messiah*, *Israel in Egypt*, *Samson*, and *Saul* ■ Concerti grossi and organ concertos ■ *Water Music*, written for an aquatic fete on the River Thames, and *Royal Fireworks Music*, celebrating the end of the War of the Austrian Succession, in 1747 ■ Sonatas for various instruments

**Encore:** After *Messiah*, listen to *Acis and Galatea*; Concerto Grosso in B-flat, Op. 6, No. 7.



## GEORGE FRIDERIC HANDEL

### *Messiah* (1742)



Handel's oratorio *Messiah*, his most famous work, is also one of the most famous in the whole of Western music. It is the only composition of its time that has been performed continuously—and frequently—since its first appearance. Today it is sung at Christmas and Easter in hundreds of churches around the world, as well as at symphony concerts and “*Messiah* sings,” where people get together just to sing along with the Hallelujah Chorus and the other well-known choral numbers, and listen to the well-loved arias.

Unlike most oratorios, *Messiah* does not have actual characters depicting a biblical story in recitative and arias, although its text is taken from the Bible. In a more typical Handel oratorio, such as *Samson*, for example, Samson sings an aria about his blindness and argues with Delilah in recitative, while choruses represent the People of Israel and the Philistines. Instead, *Messiah* works with a group of anonymous narrators, relating episodes from the life of Jesus in recitative. The narration is interrupted by anonymous commentators who react to each of the episodes by singing recitatives and arias.

All this is rather like an opera in concert form; but in addition, the chorus has a large and varied role to play. On one occasion, it sings the words of a group of angels that actually speaks in the Bible. Sometimes it comments on the story, like the soloists. And often the choristers raise their voices to praise the Lord in Handel's uniquely magnificent manner.

The first two numbers in *Messiah* we examine cover the favorite Christmas story in which an angel announces Christ's birth to the shepherds in the fields. Included are a recitative in four brief sections and a chorus.

**Recitative Part 1 (*secco*)** Sung by a boy soprano narrator accompanied by continuo (cello and organ), this recitative has the natural, proselike flow typical of all recitatives. Words that would be naturally stressed in ordinary speech are brought out by longer durations, higher pitches, and pauses: “*shepherds*,” “*field*,” “*flock*,” and “*night*.” As is typical in recitative, but unlike aria, no words are repeated.

**Part 2 (*accompanied*)** Accompanied recitative is used for special effects in operas and oratorios—here the miraculous appearance of the angel. The slowly pulsing high-string background furnishes the angel with a sort of musical halo. It is also a signal for more vigorous declamation: The words *lo*, *Lord*, and *glory* are brought out with increasing emphasis. The end of this brief accompanied recitative is heavily punctuated by a standard cadence formula, played by the continuo. This formula is an easily recognized feature of recitatives.

**Part 3 (*secco*)** Notice that the angel speaks in a more urgent style than the narrator. And in **Part 4 (*accompanied*)**, the excited, faster pulsations in the high strings depict the beating wings, perhaps, of the great crowd of angels. When Handel gets to what they will be saying, he brings the music to a triumphant high point, once again over the standard recitative cadence.

**Chorus, “Glory to God”** “Glory to God! Glory to God in the *highest!*” sing the angels—the *high* voices of the choir, in a bright marchlike rhythm. They are

SOPRANO      HARPSICHORD

sore afraid.

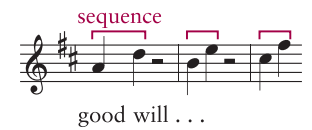
Standard cadence formula

CELLO

accompanied by the orchestra, with the trumpets prominent. The *low* voices alone add “and peace on *earth*,” much more slowly. Fast string runs following “Glory to God” and slower reiterated chords following “and peace on earth” recall the fast and slow string passages in the two preceding accompanied recitatives.

After these phrases are sung and played again, leading to another key, the full chorus sings the phrase “good will toward men” in a fugal style. The important words are *good will*, and their two-note motive is happily sung (in imitation) again and again by all the voices of the angel choir. To conclude, the “good will” motive is singled out in an enthusiastic ascending sequence.

The whole chorus is quite concise, even dramatic; the angels do not stay long. At the very end, the orchestra gets quieter and quieter—a rare effect in Baroque music, here indicating the disappearance of the shepherds’ vision.



## LISTEN

### Handel, *Messiah*, Recitative “There were shepherds” and Chorus “Glory to God”



(*Bold italic type indicates accented words or syllables. Italics indicate phrases of text that are repeated.*)

	RECITATIVE PART 1 (secco)	
0:01	There were <i>shepherds</i> abiding in the <i>field</i> , keeping <i>watch</i> over their <i>flock</i> by <i>night</i> .	
	PART 2 (accompanied)	
0:22	And <i>lo!</i> the angel of the <i>Lord</i> came upon them, and the <i>glory</i> of the Lord shone round about them; and they were sore afraid.	Standard cadence
	PART 3 (secco)	
0:42	And the angel said unto <i>them</i> : <i>Fear</i> not, for <i>behold</i> , I bring you good <i>tidings</i> of great <i>joy</i> , which shall <i>be to all people</i> . For unto you is born this <i>day</i> in the city of <i>David</i> a <i>Saviour</i> , which is <i>Christ</i> the <i>Lord</i> .	Standard cadence Standard cadence
	PART 4 (accompanied)	
1:39	And <i>suddenly</i> there was with the <i>angel</i> a <i>multitude</i> of the heavenly <i>host</i> , praising <i>God</i> , and <i>saying</i> :	Standard cadence
	CHORUS	
1:51	Glory to God, <i>glory to God</i> , in the highest, and peace on earth,	
2:30	good will toward men <i>good will</i>	
2:48	<i>Glory to God</i>	

**Hallelujah Chorus** This famous chorus brings Act II of *Messiah* to a resounding close. Like “Glory to God,” “Hallelujah” makes marvelous use of monophony (“King of Kings”), homophony (the opening “Hallelujah”), and polyphony (“And he shall reign for ever and ever”); it is almost a textbook demonstration of musical textures. Compare “And peace on earth,” “Glory to God,” and “Good will toward men” in the earlier chorus.



In a passage beloved by chorus singers, Handel sets “The Kingdom of this world is become” on a low descending scale, *piano*, swelling suddenly into a similar scale in a higher register, *forte*, for “the Kingdom of our Lord, and of his Christ”—a perfect representation of one thing becoming another thing,



Elite opera and oratorio were not the only music in Handel's London. This famous scene by William Hogarth (1697–1764) shows a violinist, sometimes identified as a player in Handel's orchestra, enraged by low-brow music and noise beneath his window.

similar but newly radiant. Later the sopranos (cheered on by the trumpets) solemnly utter the words “King of Kings” on higher and higher long notes as the other voices keep repeating their answer, “for ever, Hallelujah!”

George II of England, attending the first London performance of *Messiah*, was so moved by this chorus that he stood up in his box—prompting everyone else to stand—honoring the King of Kings, no doubt, but also reminding everyone of his own majesty, which was being acclaimed by the typical Baroque festive orchestra. Audiences still sometimes stand during the Hallelujah Chorus.



## LISTEN

### Handel, *Messiah*, Hallelujah Chorus



*(Italics indicate phrases of text that are repeated.)*

- 0:06 Hallelujah, *Hallelujah!*
- 0:23 For the Lord God omnipotent reigneth. *Hallelujah!*  
*For the Lord God omnipotent reigneth.*
- 1:09 The Kingdom of this world is become the kingdom  
of our Lord and *of his Christ.*
- 1:26 And He shall reign for ever and ever, *and he shall reign for ever and ever.*
- 1:48 KING OF KINGS *for ever and ever, Hallelujah!*  
AND LORD OF LORDS *for ever and ever, Hallelujah!*

## Remote Learning Packet

*Please submit scans of written work in Google Classroom at the end of the week.*

### **Week 7: May 11-15, 2020**

**Course:** Physical Education

**Teacher(s):** [John.Bascom@GreatHeartsIrving.org](mailto:John.Bascom@GreatHeartsIrving.org)  
[Joseph.Turner@GreatHeartsIrving.org](mailto:Joseph.Turner@GreatHeartsIrving.org)  
[James.Bascom@GreatHeartsIrving.org](mailto:James.Bascom@GreatHeartsIrving.org)

### **Weekly Plan:**

Monday, May 11

General Mobility Routine

Tuesday, May 12

Workout

Wednesday, May 13

General Mobility Routine

Thursday, May 14

Workout

Friday, May 15

Attend Office Hours (Not mandatory)

General Mobility Routine (Not mandatory)

### **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

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Student Signature

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Parent Signature

## **Monday, May 11**

### ***General Mobility Routine (15-20 minutes)***

Complete Part I and II and record how long it took you. Also, record whether or not you were able to complete all of the exercises. If you had trouble with any specific exercises make note of these.

Note: no equipment is required for this workout and only a minimum of space. If space is a challenge make modifications as necessary.

**We will have a video uploaded under the Week 6 Topic demonstrating all the exercises for the General Mobility Routine.**

#### **PART I:**

1. Warmup by running for 2 minutes.
2. Then begin in a resting squat for 30s
3. Bear crawl forwards about 5 feet then straight back.
4. Step back into a pushup position
5. Perform 5 pushups
6. Downdog for 30s
7. Updog for 30s
8. Return to a pushup position
9. Perform 5 pushups
  
10. Stand up & perform 20 jumping jacks, 10 squats, 10 lunges, and 5 burpees
11. Return to a resting squat for 30 seconds
12. While in resting squat, perform 2 shoulder screws forwards, then 2 backwards, both sides
13. Bear Crawl sideways about 5 feet then return straight back
14. Step back into a pushup position
15. Step your right foot up directly outside your right hand
16. Then reach straight up toward the sky with your right hand & hold for 30s
17. Return to pushup position
18. Step your left foot up directly outside your left hand
19. Then reach straight up toward the sky with your left hand & hold for 30s
  
20. Return to pushup position
21. 5 pushups
22. Step your feet up to your hands and return to a resting squat
23. Remaining in the squat, grab your left ankle with your right hand and reach straight up toward the sky with your left hand & hold for 30s



24. Remaining in the squat, grab your right ankle with your left hand and reach straight up toward the sky with your right hand & hold for 30s
25. Hands down behind you Crab Walk forwards about 5 feet then straight back
26. Stand up & perform 20 jumping jacks, 10 squats, 10 lunges, and 5 burpees
27. Perform 3 slow Jefferson Curls
28. Rolling Bear Crawl x1 revolution one direction
29. Back Bridge for about 10-15 seconds
30. Rolling Bear Crawl x1 revolution in the opposite direction
31. Find a low hanging branch, pullup bar, ledge, rings, etc. to hang from for as long as you can hold

## PART II:

1. Get into a plank
2. Alternate touching opposite elbow and knee for a total of 10 touches
3. Gorilla Hop x2 to the right
4. Gorilla Hop x 2 back to the left
5. Stand and perform 10 steam engine squats (fingers locked behind your head, every time you stand up from a squat touch opposite knee/elbow)
6. Hurdler's walk x6 steps forward
7. Hurdler's walk x6 steps backward
8. Frog Hop x2 forwards
9. Frog Hop x2 backwards
  
10. Get into a long lunge position
11. Keeping front foot flat on the ground, without touching the back knee to the ground, and trying to keep torso straight up and down slowly lower hips toward the ground. Hold for 15 seconds
12. Switch legs and repeat (hold for 15 seconds)
13. 3 slow Jefferson Curls
14. Rolling Bear Crawl x1 revolution one direction
15. Back Bridge for about 10-15 seconds
16. Rolling Bear Crawl x1 revolution in the opposite direction
17. Find a low hanging branch, pullup bar, ledge, rings, etc. to hang from for as long as you can hold

## Tuesday, May 12

Context: Today's workout will focus on upper body strength with a little bit of cardio. This workout will be described using distances. If you do not have access to the space these distances require feel free to substitute a time, number of repetitions, etc. If possible try to record the time it takes you to complete this workout. We will ask you to report this time in the Week 7 Participation Assessment.

Setup: You will be crawling and jogging between two points about 10 big steps apart.

Warmup: 3 minute light jog, 1 minute of shoulder warmup (arm circles, shoulder screws, etc.)

Workout: 1 round = 1 to 3 pushups, bear crawl across, jog back and forth between the two points x4 with hands overhead, 1 to 3 pushups, crab walk across, jog back and forth between the two points x4 with hands overhead.

Tier 1	3 Rounds
Tier 2	4 Rounds
Tier 3	5 Rounds
Tier 4	6 Rounds

## Wednesday, May 13

General Mobility Routine

## Thursday, May 14

Context: Today is a build your own workout day. The goal is for you to come up with a workout on your own. You may use any equipment you want, or none at all! You may craft the workout to be high or low intensity, high or low repetitions, any distance, etc.. We will offer some guidelines that you must follow, but the rest is up to you.

Try to craft a workout that will take about 15 minutes in total to complete. (or longer if you wish)

Begin with some form of a warm up.

Focus on **cardio** and **lower body** for the main part of the workout.

Finish the workout with a minute or two of light cool down.

When you have completed the workout describe what you did in “Week 7 Participation Assessment.” (On Google Classroom)

## Friday, May 15

Office Hours (Not mandatory)

General Mobility Routine (Not mandatory)

### Optional workout #1:

The workout below is **not** required. You could try to perform it on any day in addition to your daily routine. This workout will most likely take around 30 minutes.

Feel free to modify according to your ability by decreasing or increasing reps or sets. Rests between sets should be between 30s to 1 minute according to fatigue.

#### Workout:

- 3 sets of 20 squats
- 3 sets of 20 lunges
- 4 sets of 15 pushups
- 4 sets of 5 burpees
- 3 sets of 15 crunches
- 3 sets of 15 leg raises
- 3 sets of 1 minute high plank (pushup position)
- 4 sets of 10 jump lunges
- 4 sets of 10 jump squats

### Optional Workout #2:

The workout below is **not** required. You could try to perform it on any day in addition to your daily routine. This workout will most likely take around 45 minutes. Feel free to modify according to your ability by decreasing or increasing the number of sprints and the times for the rest intervals and runs.

1. 5 minute light warmup run
2. 5 minute light warmup stretch
3. Final warmup: perform 3 near sprints, 70% max speed, 80% max speed, 90% max speed.
4. Perform eight 50 meter sprints with a 30s-60s rest in between. (you want to put a bit of stress on your cardio but make sure that you have recovered enough in order to truly sprint each time)
5. Then perform 10 near sprints, between 70-90% with a 10s-20s rest, not long enough to catch your breath fully.
6. Then a 10 minute run at a moderately high speed to complete the cardio workout
7. 5 minutes cool down walk / light jog
8. 5 minutes light stretching.

### **Optional Workout #3: Squat mobility NEW and IMPROVED: (10-15 minutes)**

Looking over the week 1 packets I have noticed that a lot of you have made a goal out of improving your resting squat. I have made a short video that will instruct you on a mobility routine similar to the one described last week but expanded and developed. That video is on google classroom under the Packet Week 7 topic.

Before doing this mobility routine it is not necessary, but would be beneficial to warm up and loosen up your body a bit. Nothing specific is necessary, but a good warmup routine might look something:

1. 1 minute of light running
2. 10-20 jumping jacks
3. A few downdogs and updogs
4. 5 pushups
5. 5 burpees
6. 10 squats

## Remote Learning Packet

*Please submit scans of written work in Google Classroom at the end of the week.*

### **Week 7: May 11-15, 2020**

**Course:** Spanish I

**Teacher(s):** Ms. Barrera [anna.barrera@greatheartsirving.org](mailto:anna.barrera@greatheartsirving.org)

**Supplemental links:** [www.ling.com/barreratumble](http://www.ling.com/barreratumble) [www.spanishdict.com](http://www.spanishdict.com)

#### **Weekly Plan:**

Monday, May 11

- Capitulo 4B - Write about and discuss plans.
- Capitulo 4B - Use the Ir +a + infinitive to describe situations using a mixture of words, phrases, and simple sentences.

Tuesday, May 12

- Capítulo 4B - Read about Spanish America, its geographic features, Capitals, animal life and important products.
- Capítulo 4B - Exercises for comprehension of the reading.

Wednesday, May 13

- Capítulo 4B - Story time: Listening Activity. Patricia va a California, Chapter 3 and 4.
- Capítulo 4B Comprehension Activity: A speaking assignment to follow.

Thursday, May 14

- Capítulo 4B - Story time: Listening Activity. Patricia va a California, Chapter 5.
- Capítulo 4B - Comprehension Activity: A speaking assignment to follow.

Friday, May 15

- attend office hours
- catch-up or review the week's work

#### **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

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Student Signature

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Parent Signature

## **Monday, May 11**

Capítulo 4B - Write about and discuss plans. Use the Ir + a + infinitive to describe situations using a mixture of words, phrases, and simple sentences.

I. **Textbook: p. 206 - Activity 14** - *Este fin de semana vamos a...* ¿Que va a hacer la familia Ríos este fin de semana? Write a sentence describing in a complete sentence what each person will do and at what time. Use the Modelo as an example to write your sentences.

## **Tuesday, May 12**

Capítulo 4B - Read about Spanish America, its geographic features, Capitals, animal life and important products. Exercises for comprehension of the reading.

I. **Handout titled, Geography of Spanish America:** Read pp. 333 to 336. Then Do Exercise A true or false. Exercise B Identifying countries by writing the appropriate letter. Exercise C identifying the countries on the map provided. Exercise D matching and Exercise E Underline the word or expression that correctly completes each sentence.

## **Wednesday, May 13**

Capítulo 4B - **Story time:** Patricia va a California, **Chapter 3 and 4.** Listen to a story narrated in Spanish followed with a speaking assignment for comprehension.

I. Short Story in Spanish: Patricia va a California. Listen to the video of **Chapter 3 and 4** and then go to [lingt](#) to answer questions from those chapters. Video in is in google classroom.

## **Thursday, May 14**

Capítulo 4B - **Story time:** Patricia va a California, **Chapter 5.** Listen to a story narrated in Spanish followed with a speaking assignment for comprehension.

I. Short Story in Spanish: Patricia va a California. Listen to the video of **Chapter 5** and then go to [lingt](#) to answer questions from that chapter. Video is in google classroom.

## 2. GEOGRAPHY OF SPANISH AMERICA



### A. Countries and Their Capitals

1. **México** (capital: **México City**). Directly south of the United States, bordering the states of Texas, New Mexico, Arizona, and California; our nearest Spanish-American neighbor.
2. **In Central America**
  - a. **Costa Rica** (capital: **San José**). One of the most progressive countries in Central America.
  - b. **El Salvador** (capital: **San Salvador**). The smallest country in Central America.
  - c. **Guatemala** (capital: **Guatemala City**). The principal producer of *chicle*, used in the manufacture of chewing gum.
  - d. **Honduras** (capital: **Tegucigalpa**). Has important mineral and timber resources.
  - e. **Nicaragua** (capital: **Managua**). The largest country in Central America.
  - f. **Panamá** (capital: **Panamá City**). An isthmus joining North and South America. The Panama Canal is located here.
3. **In the West Indies (Antilles)**
  - a. **Cuba** (capital: **Havana**). The largest island of the West Indies.
  - b. **Dominican Republic** (capital: **Santo Domingo**). Together with Haiti, forms the island of Hispaniola.
  - c. **Puerto Rico** (capital: **San Juan**). A free state associated with the United States.
4. **In South America**
  - a. **Argentina** (capital: **Buenos Aires**). The largest Spanish-speaking country in South America.
  - b. **Bolivia** (capitals: **La Paz, Sucre**). Has two capitals. The only country in South America without an outlet to the sea.
  - c. **Colombia** (capital: **Bogotá**). The only South American country with seacoasts on both the Atlantic and Pacific Oceans.

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- d. **Chile** (capital: **Santiago**). The longest (and narrowest) country in South America.
- e. **Ecuador** (capital: **Quito**). The *sombreros de jipijapa*, which we call "Panama hats," are made here. They were called Panama hats by Americans, who first saw them in Panama.
- f. **Paraguay** (capital: **Asunción**). Produces *yerba* (hierba) *mate*, a popular tea used widely in Argentina and Paraguay.
- g. **Perú** (capital: **Lima**). The land of the Incas, Indians who were living here in the era of discovery.
- h. **Uruguay** (capital: **Montevideo**). The smallest Spanish-speaking country in South America.
- i. **Venezuela** (capital: **Caracas**). Richest oil-producing country of South America; birthplace of Simón Bolívar, "The Liberator."





*Note*

Some countries are not discussed here because their national language is not Spanish but French (*Haiti, Martinique, Guadeloupe, French Guiana*), English (*Belize, Jamaica, Trinidad and Tobago, Guyana*), Portuguese (*Brazil*), or Dutch (*Suriname*).

**B. Geographic Features**1. *Mountain Ranges:*

- a. **Andes.** Extend the entire length of South America, along the west coast. There are many high peaks; the highest (Aconcagua) has an altitude of nearly 23,000 feet (more than four miles!), and is the highest peak in the Western Hemisphere. There are many other peaks nearly as high.
- b. **Sierra Madre (México).** Two parallel mountain chains, **Oriental** (Eastern) and **Occidental** (Western), with a great plateau between them.

2. *Principal Rivers:*

- a. **Orinoco** (Venezuela). The longest single river in Spanish America. (The Amazon River, which is more than twice as long, is in Brazil.)
- b. **Río de la Plata** (between Uruguay and Argentina). On its banks are the capitals of both countries, **Buenos Aires** (Argentina) and **Montevideo** (Uruguay).
- c. **Paraná-Paraguay River System.** The Paraná and Paraguay Rivers form a huge river system connecting with the Río de la Plata, and are the chief water outlet from the interior regions to the sea.
- d. **Magdalena** (Colombia). Crosses the whole country from south to north; is the principal means of transportation.

3. *Climate:*

- a. Argentina, Uruguay, Paraguay, and Chile are in the South Temperate Zone (the seasons are the reverse of ours). Northern México is in the North Temperate Zone. The rest of Spanish America lies in the tropics (Torrid Zone).
- b. Most of the principal cities located in the tropics have a cool climate because they are situated at great altitudes.

**C. Animal Life**1. *Birds:*

- a. **Cóndor.** Probably the largest of flying birds; found in the Andes.
- b. **Quetzal.** Brilliantly colored bird of Guatemala. It is the national emblem. The Guatemala dollar is called the *quetzal*.

2. *Wool-Bearing Animals:*

- a. **Alpaca, guanaco, llama, vicuña** (in the Andes).
- b. **Sheep** (mainly in Argentina and Uruguay).

3. *Beasts of Burden:*

- a. **Burro.** The most common beast of burden in Spanish America.
- b. **Llama.** The main beast of burden of the Andes (Perú, Ecuador, etc.).

**D. Important Products**

1. Some of the products that Spanish America gave to the world are potatoes, corn, tomatoes, chocolate, vanilla, pineapples, peanuts, pecan and cashew nuts.

2. *Agricultural Products*

- coffee
- sugar
- tobacco
- wheat
- beef
- bananas
- cacao (bean used in making chocolate)
- tagua nuts (used in making buttons)

*Important Producers*

- Colombia, Venezuela
- Cuba, Puerto Rico
- Cuba
- Argentina, Uruguay
- Argentina, Uruguay
- most Central American countries
- Ecuador, Venezuela
- Ecuador

3. *Minerals*

- tin
- silver
- petroleum
- platinum
- emeralds
- copper
- nitrites (used for fertilizer)

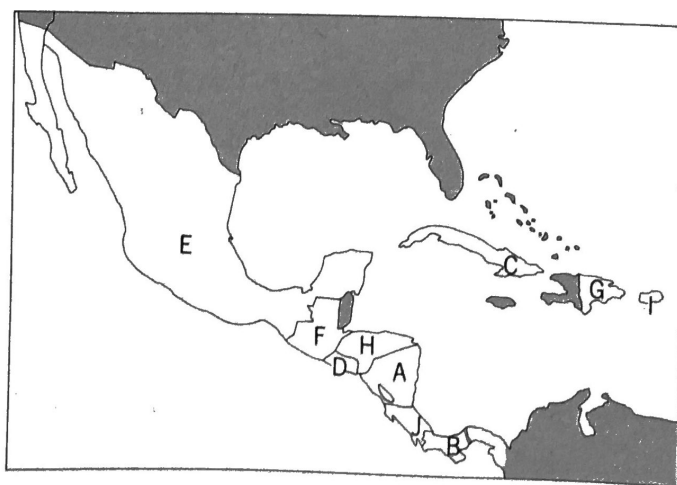
*Important Producers*

- Bolivia
- México, Perú
- Venezuela, México
- Colombia
- Colombia
- Chile, Perú
- Chile

EXERCISES

A. ¿Sí o No? If the statement is true, write **sí**; if it is false, correct it by changing the words in italics, writing the correct words in the blank.

1. Two important products of Cuba are *sugar* and *tobacco*. \_\_\_\_\_
2. Lima is the capital of *Argentina*. \_\_\_\_\_
3. *Santiago* is the capital of Colombia. \_\_\_\_\_
4. Costa Rica and Honduras produce many *bananas*. \_\_\_\_\_
5. The Paraná River flows into the *Pacific Ocean*. \_\_\_\_\_
6. Spanish is the language of *six* countries in South America. \_\_\_\_\_
7. *Montevideo* is the capital of Venezuela. \_\_\_\_\_
8. The cóndor lives in *Andes*. \_\_\_\_\_
9. México and Perú produce much *silver*. \_\_\_\_\_
10. There are *six* countries in Central America. \_\_\_\_\_



B. In the map on page 336, identify each of the following countries by writing its corresponding letter in the blank on the left:

- |       |                  |       |                 |
|-------|------------------|-------|-----------------|
| ----- | 1. Panamá        | ----- | 6. Cuba         |
| ----- | 2. Guatemala     | ----- | 7. Honduras     |
| ----- | 3. Santo Domingo | ----- | 8. Nicaragua    |
| ----- | 4. Puerto Rico   | ----- | 9. Costa Rica   |
| ----- | 5. México        | ----- | 10. El Salvador |



C. In the map above, identify each of the following countries by writing its corresponding letter in the blank on the left:

- |       |              |       |              |
|-------|--------------|-------|--------------|
| ----- | 1. Bolivia   | ----- | 6. Paraguay  |
| ----- | 2. Colombia  | ----- | 7. Ecuador   |
| ----- | 3. Argentina | ----- | 8. Venezuela |
| ----- | 4. Brazil    | ----- | 9. Uruguay   |
| ----- | 5. Chile     | ----- | 10. Perú     |

D. To the left of each item in column *A*, write the letter of the matching item in column *B*.

<i>A</i>	<i>B</i>
----- 1. Sierra Madre	<i>a.</i> river in Colombia
----- 2. tagua	<i>b.</i> capital of Nicaragua
----- 3. yerba mate	<i>c.</i> chocolate
----- 4. Aconcagua	<i>d.</i> alpaca
----- 5. tin	<i>e.</i> mountains in México
----- 6. Magdalena	<i>f.</i> high peak
----- 7. Managua	<i>g.</i> buttons
----- 8. cacao	<i>h.</i> bird of the Andes
----- 9. wool	<i>i.</i> Bolivia
----- 10. cóndor	<i>j.</i> Paraguay

E. Underline the word or expression that correctly completes each sentence.

1. There are (six, nine, twenty) Spanish-speaking countries in South America.
2. Spanish is not the official language of (Perú, Brazil, Ecuador).
3. The longest river in Venezuela is the (Orinoco, Magdalena, Río de la Plata).
4. The Andes are situated in (México, South America, Central America).
5. The quetzal is found mainly in (Guatemala, Chile, Bolivia).
6. The (llama, horse, burro) is the main beast of burden in the Andes Mountains.
7. In Chile, Argentina, and Uruguay, it is cold in the month of (December, July, January).
8. The capital of Costa Rica is (San Juan, San Salvador, San José).
9. (Colombia, Paraguay, Bolivia) is the only South American country without an outlet to the ocean.
10. Panamá hats are made in (Ecuador, Panamá, Paraguay).



Diego Rivera (1886–1957) was a noted Mexican mural painter. His art portrays the oppressed and down-trodden workers and peasants of his country. Rivera's murals decorate the walls of many public buildings in Mexico and the United States.