



## AESD Independent Study Packet Weeks 10 & 11 (5/25-29 & 6/1-3)

### Grade Span 6-8

Time Frame	Monday-Memorial Day	Tuesday	Wednesday	Thursday	Friday	Monday-Wednesday
8:00am-8:45am ELA	<b>Extra/Daily Activities:</b> <ul style="list-style-type: none"> <li>• <b>Read for at least 30 minutes.</b> Choose an A.R. book, a magazine, or log in to <b>myOn</b> to access a digital library and news articles. Use this district link: <a href="https://www.myon.com/school/adelantoreads">https://www.myon.com/school/adelantoreads</a>, <b>Student Username</b> for Grade 6: <b>myon6</b>; for Grade 7: <b>myon7</b>; for Grade 8: <b>myon8</b>; and Student Password for All Grades: <b>123</b>. <b>*If you don't have access to these, read the passages in this packet.</b></li> <li>• <b>Take an A.R. quiz</b> through your Renaissance Clever Log in on the AESD website <a href="https://www.aesd.net/Content2/4">https://www.aesd.net/Content2/4</a></li> <li>• Do <b>Lexia lessons/units</b> through your Clever Log in on the AESD website <a href="https://www.aesd.net/Content2/4">https://www.aesd.net/Content2/4</a></li> <li>• <b>Read &amp; Respond.</b> See your copy of the <i>Read &amp; Respond Choice Board</i> and pick your choice of activity.</li> <li>• <b>Vocabulary Journal.</b> Circle/Highlight the unfamiliar vocabulary words you find in the reading passages in this packet. Create or complete your vocabulary journal on the words you identified.</li> <li>• <b>Writing Prompts.</b> See your copy of <i>Middle School Writing Prompts</i> and respond to your choice.</li> </ul>					
	<b>Note: ELA Packet Level 1=Grade 6; ELA Packet Level 2=Grade 7; ELA Packet Level 3=Grade 8</b>					
		Vocabulary- ( p. 291); Work on your Vocabulary Journal.	Read the poem "Ode to Mr. Lincoln". Check your understanding by asking yourself what the theme, or message, of the poem is. Answer the comprehension questions. (pp. 293-294)	Reread the poem "Ode to Mr. Lincoln". and review your answers on p. 294. Complete the theme graphic organizer on p. 292. Then, do the fluency assessment at the bottom of p. 294.	Genre/Literary Elements; Literary Elements: Repetition and Imagery (pp. 295-296)	Monday: Vocabulary Strategy: Figurative Language; Word Study: Words from Mythology (pp. 297-298)  Tuesday: Write About Reading: Write an Analysis; Writing Traits: Word Choice (pp. 299-300)

						Wednesday: Refer to the above daily activities. Do your <i>Week in Review</i> . Follow the directions above.
Break						
9:00am-9:45am Math	This i-Ready “At-Home-Activity” includes sets of practice problems that align to important math concepts your student has worked with so far this year. We recommend that your student completes one page of practice problems each day. Encourage your student to do the best they can with this content—the most important thing is that they continue developing their mathematical fluency and skills!					
		Grade 6: Math packet pg 30 Grade 7: Math Packet pg 31 Grade 8: Math Packet pg 30	Grade 6: Math packet pg 31 Grade 7: Math Packet pg 32 Grade 8: Math Packet pg 31	Grade 6: Math packet pg 32 Grade 7: Math Packet pg 33 Grade 8: Math Packet pg 32	Grade 6: Math packet pg 33 Grade 7: Math Packet pg 34 Grade 8: Math Packet pg 33	<b>6th Grade</b> <u><b>Monday:</b></u> Math packet pg 34 <u><b>Tuesday:</b></u> Math packet pg 35 <u><b>Wednesday:</b></u> Math packet pg 36  <b>7th Grade</b> <u><b>Monday:</b></u> Math packet pg 35 <u><b>Tuesday:</b></u> Math packet pg 36 <u><b>Wednesday:</b></u> Math packet pg 37  <b>8th Grade</b> <u><b>Monday:</b></u> Math packet pg 34 <u><b>Tuesday:</b></u> Math packet pg 35 <u><b>Wednesday:</b></u> Math packet pg 36
Break						

<p>10:00-10:45am History</p>		<p>Complete the “Hook Activity: Harriet Tubman.”</p> <p>Imagine you are living during this time period. Who do you think the people who ran the Underground Railroad were? What kinds of people were they? What were their characteristics? Think about the code words they had to use. Why do you think that was the case? What are your feelings on this? Would this have been stressful?</p> <p>Jot down your thoughts on the blank paper provided. Write at least a paragraph.</p> <p><b>UPGRADE ACTIVITY:</b> Use the “Hook Activity: Harriet Tubman” to create your own Coded Sentence. Make up a sentence, using the code words, to describe what an Underground Railroad participant might say.</p>	<p>Use your Marking the Text Strategies as you read the “Background Essay: What was Harriet Tubman’s Greatest Achievement.” See the “Overview” document in this packet for help with Marking the Text Strategies.</p> <p><b>UPGRADE ACTIVITY:</b> On the blank paper provided, write a 1 paragraph summary of “Background Essay: What was Harriet Tubman’s Greatest Achievement.” See the “Overview” document in this packet for help with writing a paragraph summary.</p>	<p>Use your A.C.E. Strategy (see “Overview” document for help) to complete the “Background Essay Questions.”</p> <p><b>UPGRADE ACTIVITY:</b> Using the dates and corresponding events on the “Background Essay Questions” page, create a timeline using the document provided in this packet. Choose four of the dates/events you find most interesting or surprising and draw a picture next to the date/event (on the timeline) depicting the event.</p>	<p>Complete the “Understanding the Question and Pre-Bucketing” worksheet.</p> <p>Use your Marking the Text and A.C.E. Strategies (see “Overview” document for help) as you read the text and answer the questions on “Document A.”</p> <p><b>UPGRADE ACTIVITY:</b> Would you have taken the same route as Harriet? On the blank paper provided, describe the route you would have taken to move from the South to Canada then justify why you would have taken that route.</p>	<p><b><u>MONDAY:</u></b> Use your Marking the Text and A.C.E. Strategies (see “Overview” document for help) as you complete “Document B.”</p> <p><b>UPGRADE ACTIVITY:</b> What patterns do you see in the data presented in “Document B?” DO you see similarities between the “Cargo” that Harriet moved? What about in the “Pick Up Points” and “End Points?”</p> <p>Jot down the patterns you see on the blank paper provided.</p> <p><b><u>TUESDAY:</u></b> Use your Marking the Text and A.C.E. Strategies (see “Overview” document for help) as you complete “Document C.”</p> <p><b>UPGRADE ACTIVITY:</b> Use your Marking the Text and A.C.E. Strategies (see “Overview” document for help) as you complete “Document E.”</p> <p><b><u>WEDNESDAY:</u></b> Use your Marking the Text and A.C.E. Strategies (see</p>
----------------------------------	--	---	---	--	--	---

						<p>“Overview” document for help) as you complete “Document D.”</p> <p><b>UPGRADE ACTIVITY:</b> Over the course of her lifetime, Harriet Tubman risked her life to help a tremendous amount of people. Of all the accomplishments that you read about this and last week, what do you think was Harriet Tubman’s greatest achievement?</p> <p>Use the documents you read this and last week to write a persuasive essay answering the above prompt. Refer to the “Overview” document for help writing a persuasive essay. You can write your essay on the blank paper provided.</p>
Lunch						
11:45am-12:30pm SEL	Write a poem from someone else’s perspective. Choose someone you don’t know well, from school, or the media, or someplace else in your life. You don’t need to know someone really well to empathize with them. See what you can discover about what they might be feeling and experiencing.					
Break						
12:45pm - 1:30pm		<b>6th &amp; 7th Grades-</b> Read “Apples: The Health Benefits.”	<b>6th &amp; 7th Grades -</b> Read “Apples: The Health Benefits.” Try	<b>6th &amp; 7th Grades -</b> Read “Apples: The Health Benefits.” Try	<b>6th &amp; 7th Grades -</b> Read “Apples: The Health Benefits.” Try	<b>6th &amp; 7th Grades</b> Mon - Read “Shock Waves.” Answer questions



<p><b>Science</b></p>		<p>Underline words that you don't know how to read. Practice sounding them out. Read the story again. Focus on correctly saying the words that are unfamiliar to you. Answer Comprehension questions 1, 2 and 3. Read about the vocabulary word "cancer." Write and illustrate a sentence using the vocabulary word.</p> <p><b>8th Grade</b> - Read "Wetlands and Habitats." Underline words that you don't know how to read. Practice sounding them out. Re-read the article. Focus on correctly saying the words that are unfamiliar to you. Answer questions 1, 2, and 3. Read about the vocabulary word "buffer." Write and illustrate a sentence using the vocabulary word.</p>	<p>reading it faster today than you did yesterday. Do you know how to say all of the words that you did not know yesterday? Have you learned the meaning of those words? Answer Comprehension questions 4, 5 and 6. Read about the vocabulary word "damage." Write 2 sentences using the word "damage" as it is used in the article. Draw a picture to illustrate your sentences.</p> <p><b>8th Grade--</b> Read "Wetlands and Habitats." Try reading it faster today than you did yesterday. Do you know how to say all of the words that you did not know yesterday? Have you learned the meaning of those words? Answer Comprehension questions 4, 5 and 6.</p>	<p>reading it faster today than you did yesterday. Answer questions 7 and 8. Write 3 facts you learned from this article. Use complete sentences. Read about the vocabulary word "disease." Write and illustrate a sentence using the vocabulary word.</p> <p><b>8th Grade--</b> Read "Wetlands and Habitats." Try reading it faster today than you did yesterday. Answer Comprehension questions 7 and 8. Read about the vocabulary word "transition." Write 3 sentences using the word "transition." Draw a picture to illustrate your sentences.</p>	<p>to read it faster than you have been doing. Answer Comprehension question 9 and 10. Use complete sentences.</p> <p><b>8th Grade</b> - Read "Wetlands." Try to read it faster than you have been doing. Answer questions 9 and 10. Write your answers in a complete paragraph for each question.</p>	<p>1, 2 and 3. Tues- Answer questions 4,5 and 6. Read about the vocabulary word "indicate." Write and illustrate a sentence using indicate. Wed- Answer question 7</p> <p>Enjoy your summer vacation. We look forward to seeing you next fall.</p> <p><b>8th Grade -</b> Mon - Read "Designing the First Flying Machine." Answer questions 1, 2 and 3. Read about the vocabulary word "glide." Tues - Answer questions 4, 5 and 6. Read about the vocabulary word "innovation." Wed - Answer questions 7, 8 and 9. Read about the vocabulary word "viable."</p> <p>Congratulations on your Promotion to High School. We will the best for you as you progress on your academic journey! Have a safe and wonderful summer!</p>
-----------------------	--	--	--	---	--	---

			<p>Read about the vocabulary word “preserve.” Write and illustrate 2 sentences, in your own words, using the word “preserve” as it applies to the story.</p>			
--	--	--	--	--	--	--

A blank sheet of lined paper with horizontal blue lines and a black border. The lines are evenly spaced and run across the width of the page. The entire page is enclosed in a thin black rectangular frame.

A blank sheet of lined paper with horizontal blue lines and a black border. The lines are evenly spaced and run across the width of the page. The entire page is enclosed in a thin black rectangular frame.

Name: \_\_\_\_\_

Choose two of the vocabulary words you are learning. Answer the parts needed below. Copy the format on the back page to work on other vocabulary words.

\_\_\_\_\_ Date: \_\_\_\_\_

## Vocabulary Journal

<b>Word:</b> <b>Part of Speech:</b>	<b>Meaning:</b> _____ _____
<b>Picture:</b>          	<b>Synonyms/Examples</b>          
	<b>Antonyms/Non-Examples:</b>          
<b>Sentence:</b>          	

<b>Word:</b> <b>Part of Speech:</b>	<b>Meaning:</b> _____ _____
<b>Picture:</b>          	<b>Synonyms/Examples</b>          
	<b>Antonyms/Non-Examples:</b>          
<b>Sentence:</b>          	

Name: \_\_\_\_\_

Choose two of the vocabulary words you are learning. Answer the parts needed below. Copy the format on the back page to work on other vocabulary words.

\_\_\_\_\_ Date: \_\_\_\_\_

## Vocabulary Journal

Word:

Part of Speech:

Meaning: \_\_\_\_\_

\_\_\_\_\_

Picture:

Synonyms/Examples

Antonyms/Non-Examples:

Sentence:

Word:

Part of Speech:

Meaning: \_\_\_\_\_

\_\_\_\_\_

Picture:





Synonyms/Examples

Antonyms/Non-Examples:

Sentence:

Name \_\_\_\_\_

Use the word chart to study this week's vocabulary words.  
Write a sentence using each word in your writer's notebook.

Word	Context Sentence	Illustration
incentive	My mother will take me to the movies as an <u>incentive</u> to clean my room.	
horizons	Science camp helped us expand our <u>horizons</u> .	
recreation	Camping is my family's favorite form of <u>recreation</u> .	
unfettered	<u>Unfettered</u> by the cage, the bird flew out the window.	

Name \_\_\_\_\_

Read the selection. Complete the theme graphic organizer.

Detail

↓

Detail

↓

Detail

↓

Theme

Name \_\_\_\_\_

Read the passage. Check your understanding by asking yourself what the theme, or message, of the poem is.

### Ode to Mr. Lincoln

9 I watch as you sit on your marble chair,  
19 I see your marble arms and hands, solid and firm  
30 As the earth itself, and I think to myself those hands  
40 Once held a whole country together. I think to myself  
48 Those hands once held the future of democracy  
59 As gently as morning light falls on a field of battle.  
How could one man not bend under that burden?

68 You saw to it that people were free,  
76 No matter their color or race or creed,  
84 No matter what songs they sang.  
90 You saw to it that all of your people had choices.  
101 You followed the path you chose for yourself  
109 As surely as the stars follow their paths across the sky.



Photo: P. P. P. P. P.

120 The worries of your life are behind you, Mr. Lincoln,  
130 Though once they lay heavy on your heart—  
138 As weighty as mountains of stone on the horizon,  
147 As numerous as snowflakes covering a burial ground.  
155 The union has lasted far beyond four score and seven years,  
166 but you can rest till time and tide are done  
176 and let your thoughts wander wherever they will.

Name \_\_\_\_\_

A. Reread the passage and answer the questions.

1. Look at the title of the poem. Who is the speaker talking to?

\_\_\_\_\_

2. In the second stanza, the speaker says, "You saw to it that people were free, No matter their color or race or creed." Does the speaker think this is a good thing? Explain.

\_\_\_\_\_

3. What words from the poem show that the speaker thinks Lincoln was a good man?

\_\_\_\_\_

4. Which statement best describes the theme, or message, of this poem? Circle the letter of your answer.

- a. Although Lincoln is now dead, his accomplishments have lasted a long time.
- b. Lincoln knew that people should be free.
- c. The burdens that Lincoln faced caused him to live a short life.

B. Work with a partner. Read the passage aloud. Pay attention to expression and phrasing. Stop after one minute. Fill out the chart.

	Words Read	—	Number of Errors	=	Words Correct Score
First Read		—		=	
Second Read		—		=	



Name \_\_\_\_\_

**To an Artist**

The city is bustling, noisy, and bright  
 With trucks, cars, and taxicabs, both day and night,  
 And with people so anxious to get here or there,  
 As they text on their cell phones and fuss with their hair.  
 On they go, pounding the pavement and street.  
 On they go, wearing their shoes off their feet.  
 At a corner an artist stands, paintbrush in hand,  
 A statue of silence observing the land.  
 Like a wizard, he captures a moment—Look! There!  
 Beauty on canvas; most pass, unaware.

Answer the questions about the text.

1. Lyric poetry expresses the speaker's thoughts and feelings. In this text, what thought or feeling does the speaker express?

---



---



---

2. Repetition is the repeating of the same words, phrases, or lines. What repetition can you find in this text?

---



---



---



---



---

3. Imagery is the use of words that appeal to the senses to describe. What is one example of imagery in this text?

---



---



---



---

Name \_\_\_\_\_

**Repetition** is the repeating of a word or phrase.

Example: *Sing, sing. Sing* your song.

**Imagery** is the use of words to create a picture in the reader's mind.

Example: Like dark lace, the bare branches of winter's trees spread across the sky.

Read the lines of the ode below. Then answer the questions.

**Ode to Mr. Lincoln**

*I watch as you sit on your marble chair,  
 I see your marble arms and hands, solid and firm  
 As the earth itself, and I think to myself those hands  
 Once held a whole country together. I think to myself  
 Those hands once held the future of democracy  
 As gently as morning light falls on a field of battle.  
 How could one man not bend under that burden?*

1. What line is repeated in the poem?

---

2. Find two other words that are repeated in the poem. Circle those words.

3. What images, or pictures, come to mind as you read? Describe two of these images.

---



---

4. Write a short poem about morning. Include repetition and imagery.

---



---



---



---

Name \_\_\_\_\_

Poets use **figurative language**, such as similes and metaphors, to engage readers by creating images through comparison. One type of figurative language is **hyperbole**, or exaggeration, as in the bold phrase in this passage. Authors use hyperbole to emphasize a point.

The worries of your life are behind you, Mr. Lincoln,  
Though once they lay heavy on your heart—  
As weighty as mountains of stone on the horizon,  
As numerous as snowflakes covering a burial ground.

Read each passage. Pay special attention to the words in bold. Then read each statement below the passage and write an X to show if it is true or false.

1. I see your marble arms and hands, **solid and firm**

As the **earth itself**, and I think to myself those hands  
Once held a whole country together.

The poet says that the marble arms and hands of Lincoln's statue are more solid than the earth itself.

☐ True ☐ False

2. You followed the path you chose for yourself

As surely as the stars follow their paths across the sky.

The poet compares the way Lincoln followed his path through life to the way a star follows its path across the sky.

☐ True ☐ False

3. The worries of your life are behind you, Mr. Lincoln,

Though once they lay heavy on your heart—  
As **weighty as mountains of stone on the horizon**,

The poet compares Lincoln's worries to mountains of stone.

☐ True ☐ False

Name \_\_\_\_\_

Many English words contain Greek or Latin word parts. Some of these word parts come from Greek and Roman myths. Understanding the relationship between English words and their origins in mythology can help you determine the meaning of unfamiliar words.

Read each clue about mythology on the left. Draw a line to the English word on the right that is based on the Greek or Roman name. The first one has been done for you.

- |  |          |
|--|----------|
| 1. Cupid, Roman god of love  | echo     |
| 2. Echo, Greek character who could only repeat the words of others | January  |
| 3. Flora, Roman goddess of flowers                                 | museum   |
| 4. Janus, Roman god of beginnings                                  | Olympics |
| 5. Olympus, mountain home of the gods                              | titanic  |
| 6. Muses, Greek goddesses of arts and sciences                     | cupid    |
| 7. Ceres, the Roman goddess of grain                               | floral   |
| 8. Titans, Greek giants with enormous strength                     | cereal   |

Name \_\_\_\_\_

<b>Topic sentence</b>	→	I think the theme of “Ode to Mr. Lincoln” is how important it is to remember that the difficult things Abraham Lincoln accomplished have lasted.
<b>Evidence</b>	→	The poet says that Lincoln’s “solid and firm” hands held the country together. He didn’t actually do it with his bare hands. The poet is saying how strong and resolved he was.
<b>Concluding statement</b>	→	By saying that the union has lasted beyond 87 years, the poet shows that Lincoln’s achievement was a lasting one. For these reasons, I believe the theme of this poem is that Lincoln’s life continues to affect us all.

Write a topic sentence: \_\_\_\_\_

Cite evidence from the text: \_\_\_\_\_

End with a concluding statement: \_\_\_\_\_

Name \_\_\_\_\_

## Draft Model

1. Why do the clouds look like a good place to lie down and take a nap? What words make you think of a relaxing place?
2. How might it feel to lie down on the clouds? What words will best convey how the speaker feels about lying in the clouds?
3. How would you describe time passed in the clouds? What words best convey the sort of experience the speaker might have on a cloud?

[illegible]

Name \_\_\_\_\_

incentive

horizons

recreation

unfettered

**A. Write each word next to its definition.**

1. the limit of someone's experiences \_\_\_\_\_

2. something that motivates a person \_\_\_\_\_

3. free and unrestricted \_\_\_\_\_

4. an activity that a person does for fun \_\_\_\_\_

**B. Write four sentences. Use one vocabulary word in each sentence.**

5. \_\_\_\_\_

\_\_\_\_\_

6. \_\_\_\_\_

\_\_\_\_\_

7. \_\_\_\_\_

\_\_\_\_\_

8. \_\_\_\_\_

\_\_\_\_\_

Name \_\_\_\_\_

Read the selection. Complete the theme graphic organizer.

Detail



Detail



Detail



Theme

Name \_\_\_\_\_

Read the passage. Check your understanding by asking yourself what the theme, or message, of the poem is.

### Ode to Mr. Lincoln

I watch as you sit on your marble chair,  
 I see your marble arms and hands, solid and firm  
 As the earth itself, and I think to myself those hands  
 Once held a whole country together. I think to myself  
 Those hands once held the future of democracy  
 As gently as morning light falls on a field of battle.  
 How could one man not bend under that burden?

You saw to it that people were free,  
 No matter their color or race or creed,  
 No matter what songs they sang.  
 You saw to it that all of your people had choices.  
 You followed the path you chose for yourself  
 As surely as the stars follow their paths across the sky.



PhotoDisc/Punchbook

The worries of your life are behind you, Mr. Lincoln,  
 Though once they lay heavy on your heart—  
 As weighty as mountains of stone on the horizon,  
 As numerous as snowflakes covering a burial ground.  
 The union has lasted far beyond four score and seven years,  
 but you can rest till time and tide are done  
 and let your thoughts wander wherever they will.

Name \_\_\_\_\_

#### A. Reread the passage and answer the questions.

1. Reread the first stanza. Who is the speaker talking to?

\_\_\_\_\_

2. In the first stanza, the speaker describes Lincoln's hands as "solid and firm/As the earth itself." What does that tell you about the speaker's view of Lincoln?

\_\_\_\_\_

\_\_\_\_\_

3. What does the phrase "The worries of your life are behind you" mean?

\_\_\_\_\_

\_\_\_\_\_

4. Which statement best describes the theme, or message, of this poem? Circle the letter of your answer.

- a. Although Lincoln is now dead, his accomplishments have lasted a long time.
- b. Lincoln led the country during the Civil War.
- c. The burdens that Lincoln faced caused him to live a short life.

#### B. Work with a partner. Read the passage aloud. Pay attention to expression and phrasing. Stop after one minute. Fill out the chart.

	Words Read	—	Number of Errors	=	Words Correct Score
First Read		—		=	
Second Read		—		=	



Name \_\_\_\_\_

**To an Artist**

The city is bustling, noisy, and bright  
 With trucks, cars, and taxicabs, both day and night,  
 And with people so anxious to get here or there,  
 As they text on their cell phones and fuss with their hair.  
 On they go, pounding the pavement and street.  
 On they go, wearing their shoes off their feet.  
 At a corner an artist stands, paintbrush in hand,  
 A statue of silence observing the land.  
 Like a wizard, he captures a moment—Look! There!  
 Beauty on canvas; most pass, unaware.

Answer the questions about the text.

1. Lyric poetry expresses the speaker's thoughts and feelings. In this text, what are two thoughts or feelings the speaker expresses?

\_\_\_\_\_

\_\_\_\_\_

2. An ode is a lyric poem that praises one topic, such as a person, a part of nature, an object, or an idea. In this text, what is the speaker praising?

\_\_\_\_\_

\_\_\_\_\_

3. In poetry, repetition occurs when the same words, phrases, or lines are repeated. What repetition can you find in the poem?

\_\_\_\_\_

\_\_\_\_\_

4. Imagery is the use of words that appeal to the senses and create powerful images. What is one powerful image in the poem?

\_\_\_\_\_

\_\_\_\_\_

Name \_\_\_\_\_

**Repetition** is the repeating of a word or phrase.

Example: *Sing, sing. Sing* your song.

**Imagery** is the use of words to create a picture in the reader's mind.

Example: Like dark lace, the bare branches of winter's trees spread across the sky.

Read the lines of the ode below. Then answer the questions.

**Ode to Mr. Lincoln**

*I watch as you sit on your marble chair,  
 I see your marble arms and hands, solid and firm  
 As the earth itself, and I think to myself those hands  
 Once held a whole country together. I think to myself  
 Those hands once held the future of democracy  
 As gently as morning light falls on a field of battle.  
 How could one man not bend under that burden?*

1. What phrase is repeated in the poem?

\_\_\_\_\_

2. What is another important word that the poem's speaker repeats?

\_\_\_\_\_

3. What are two strong images, or pictures, that come to mind as you read?

\_\_\_\_\_

4. Write a short poem about morning. Include repetition and imagery.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Name \_\_\_\_\_

Poets use **figurative language**, such as similes and metaphors, to engage readers by creating images through comparison. One type of figurative language is **hyperbole**, or exaggeration, as in the bold phrase in this passage. Authors use hyperbole to emphasize a point.

The worries of your life are behind you, Mr. Lincoln,  
Though once they lay heavy on your heart—  
As weighty as mountains of stone on the horizon,  
As **numerous as snowflakes** covering a burial ground.

Read each passage and pay special attention to the words in bold. Then read each statement below the passage and write an X to show if it is true or false.

1. I see your marble arms and hands, **solid and firm**  
As **the earth itself**, and I think to myself those hands  
Once held a whole country together.

The speaker believes that the marble arms and hands of Lincoln's statue are more solid than the earth itself.

☐ True ☐ False

The hyperbole helps express the feeling that the statue's marble arms and hands are very solid.

☐ True ☐ False

2. You followed the path you chose for yourself  
As **surely as the stars follow their paths across the sky**.

The speaker compares the way Lincoln followed his path through life to the way a star follows its path across the sky.

☐ True ☐ False

The hyperbole helps give the feeling that Lincoln was uncertain in the path he followed.

☐ True ☐ False

Name \_\_\_\_\_

Many English words contain Greek or Latin word parts. Some of these word parts come from Greek and Roman myths. Understanding the relationship between English words and their origins in mythology can help you determine the meaning of unfamiliar words.

Word from Mythology	Meaning
Echo	Greek character who could only repeat the words of others
Janus	Roman god of beginnings
Muses	Greek goddesses of arts and sciences
Olympus	Mountain home of the Greek gods
Flora	Roman goddess of flowers
Titans	Greek gods who were giants
Sirens	Greek beings who lured sailors to their deaths with songs

A. Read each sentence. Use the information in the chart to underline the word that comes from Greek or Roman mythology. Then write the Greek or Roman name that the word comes from. The first one has been done for you.

- The surfer came into shore on a titanic wave. Titans
- Cars and buses pulled over when they heard the siren. \_\_\_\_\_
- When we yelled our names into the cave, we heard an echo. \_\_\_\_\_
- A floral arrangement was at the center of the dinner table. \_\_\_\_\_
- The science museum had an exhibit on the human body. \_\_\_\_\_
- We enjoy watching the Winter Olympics. \_\_\_\_\_
- I really like having my birthday in January. \_\_\_\_\_

Write About Reading: **Write an Analysis**

Name \_\_\_\_\_

*Evidence* is details and examples from a text that support a writer's ideas. The student who wrote the paragraph below cited evidence to support an argument about what the theme of a poem is.

Topic sentence	→	I think the theme of "Ode to Mr. Lincoln" is how important it is to remember that the difficult things Abraham Lincoln accomplished have lasted.
Evidence	→	The poet says that Lincoln's "solid and firm" hands held the country together. He didn't actually do it with his bare hands. The poet is saying how strong and resolved he was. By saying that the union has lasted beyond 87 years, the poet shows that Lincoln's achievement was a lasting one.
Concluding statement	→	For these reasons, I believe the theme of this poem is that Lincoln's life continues to affect us all.

Write a paragraph about the poem you chose. Cite evidence from the text to show how details in the poem support what you think is the theme, or the poet's overall message. Remember to combine sentences correctly as needed.

Write a topic sentence: \_\_\_\_\_  
\_\_\_\_\_

Cite evidence from the text: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

End with a concluding statement: \_\_\_\_\_  
\_\_\_\_\_

Name \_\_\_\_\_

**A. Read the draft model. Use the questions that follow the draft to help you choose words with connotations that accurately express the speaker's feelings.**

**Draft Model**

I like to look at clouds as they move across the sky. They look like a good place to lie down and take a nap or read a book.

1. Why do the clouds look like a good place to lie down and take a nap? What words make you think of a relaxing place?
2. How might it feel to lie down on the clouds? What words will best convey how the speaker feels about lying in the clouds?
3. How would you describe time passed in the clouds? What words best convey the sort of experience the speaker might have on a cloud?

**B. Now revise the draft by adding descriptive words with connotations that accurately and clearly express the speaker's feelings.**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



Name \_\_\_\_\_

incentive      horizons      recreation      unfettered

Fill in the blanks with a vocabulary word from the box to create a multiple-choice test. Then circle the correct answer.

- Which of these is the meaning of \_\_\_\_\_?  
 a. experiences      b. inventions      c. lost objects
- Which of these is an antonym for \_\_\_\_\_?  
 a. free      b. restricted      c. curious
- Which of these is a synonym for \_\_\_\_\_?  
 a. truth      b. motivation      c. goal
- Which of these is an antonym for \_\_\_\_\_?  
 a. work      b. freedom      c. sport

Name \_\_\_\_\_

Read the selection. Complete the theme graphic organizer.

Detail



Detail



Detail



Theme

Name \_\_\_\_\_

Read the passage. Check your understanding by asking yourself what the theme, or message, of the poem is.

### Ode to Mr. Lincoln

I watch as you sit on your marble chair,  
I see your marble arms and hands, solid and firm  
As the earth itself, and I think to myself those hands  
Once held a whole country together. I think to myself  
Those hands once held the future of democracy  
As gently as morning light falls on a field of battle.  
How could one man not bend under that burden?

You saw to it that people were free,  
No matter their color or race or creed,  
No matter what songs they sang.  
You saw to it that all of your people had choices.  
You followed the path you chose for yourself  
As surely as the stars follow their paths across the sky.



PhotoDisc/Punchbook

The worries of your life are behind you, Mr. Lincoln,  
Though once they lay heavy on your heart—  
As weighty as mountains of stone on the horizon,  
As numerous as snowflakes covering a burial ground.  
The union has lasted far beyond four score and seven years,  
but you can rest till time and tide are done  
and let your thoughts wander wherever they will.

Name \_\_\_\_\_

#### A. Reread the passage and answer the questions.

1. What monument does the author describe in this poem? Why do you think the author chose that setting?

---



---



---

2. What accomplishments of Lincoln's does the author refer to?

---



---



---

3. What is the theme of this poem?

---



---

4. Choose another person whose accomplishments you would want to describe in a poem. Write the name of the person and several words or phrases you could use in your poem.

---



---

#### B. Work with a partner. Read the passage aloud. Pay attention to expression and phrasing. Stop after one minute. Fill out the chart.

	Words Read	—	Number of Errors	=	Words Correct Score
First Read		—		=	
Second Read		—		=	

Name \_\_\_\_\_

**To an Artist**

The city is bustling, noisy, and bright  
 With trucks, cars, and taxicabs, both day and night,  
 And with people so anxious to get here or there,  
 As they text on their cell phones and fuss with their hair.  
 On they go, pounding the pavement and street.  
 On they go, wearing their shoes off their feet.  
 At a corner an artist stands, paintbrush in hand  
 A statue of silence observing the land.  
 Like a wizard, he captures a moment—Look! There!  
 Beauty on canvas; most pass, unaware.

**Answer the questions about the text.**

1. Why do you think the poet chose the forms of lyric poetry and ode to convey the message of this text?

---



---



---



---

2. How do repetition and imagery work together to convey the poet's message? Cite an example of each from the text to support your answer.

---



---



---



---

3. What image might you add to the text to help convey its message? Write two lines at the end that contain an image and an example of repetition.

---



---

Name \_\_\_\_\_

**Repetition** is the repeating of a word or phrase. Poets use repetition to emphasize the importance of the ideas the words express and to give the poem rhythm.

**Imagery** is the use of words that appeal to the senses to create a vivid picture in the reader's mind.

**Read the lines of the ode below. Then answer the questions.****Ode to Mr. Lincoln**

*I watch as you sit on your marble chair,  
 I see your marble arms and hands, solid and firm  
 As the earth itself, and I think to myself those hands  
 Once held a whole country together. I think to myself  
 Those hands once held the future of democracy  
 As gently as morning light falls on a field of battle.  
 How could one man not bend under that burden?*

1. Why do you think the poet repeats the phrase "I think to myself those hands once held"? Explain the importance of this line and its effect on the poem.

---



---

2. Which image in the poem creates the strongest emotional response in you? Explain.

---



---



---

3. Choose someone you admire. Then write a short ode about the person. Include repetition and imagery.

---



---



---

Name \_\_\_\_\_

A. Read each passage and pay special attention to the hyperbole, or exaggeration, in bold. Then write one or two sentences telling what you think the hyperboles express about Abraham Lincoln.

1. I see your marble arms and hands, **solid and firm**  
As **the earth itself**, and I think to myself those hands  
Once held a whole country together.

---

---

---

2. You followed the path you chose for yourself  
As surely as the stars follow their paths across the sky.

---

---

---

3. The worries of your life are behind you, Mr. Lincoln,  
Though once they lay heavy on your heart—  
As **weighty as mountains of stone on the horizon**,  
As **numerous as snowflakes covering a burial ground**.

---

---

---

B. Write a short paragraph answering this question: How does the use of hyperbole in this poem make Abraham Lincoln seem larger than life?

---

---

---

---

Name \_\_\_\_\_

Read the words in the box below and study the chart. Then write the correct word from the box in the third column of the chart.

tantalize	arachnid	nemesis	hygiene	hypnotize	odyssey
iris	narcissism	venerate	helicopter	terrain	hermetic

Word from Mythology	Meaning	Related Word in English
Arachne	Greek girl who Athena turned into a spider	_____
Iris	Greek goddess of the rainbow	_____
Narcissus	Greek boy who fell in love with his own reflection	_____
Nemesis	Greek goddess of retribution for evil	_____
Venus	Roman goddess of love	_____
Helios	Greek god of the sun who rode a chariot across the sky	_____
Terra Mater	Roman goddess of the earth	_____
Hermes	Greek god of boundaries	_____
Hygieia	Greek goddess of health	_____
Hypnos	Greek character who represents sleep	_____
Tantalus	Greek figure punished for misdeeds by having water and fruit just out of his reach	_____
Odysseus	Greek adventurer known for his long travels	_____



## Writing and Solving One-Variable Equations *continued*

- 4 Wanda earned \$350 babysitting over the months of July and August. She earned \$90 more in August than in July. How much did she earn babysitting in July?

- 5 Charlene is 8 years older than Aaron. The sum of their ages is 44. What are their ages?

- 6 On Saturday, 45% of the music Brianna listened to was country songs. She listened to 27 country songs on Saturday. How many songs did Brianna listen to on Saturday?

## Writing and Graphing One-Variable Inequalities

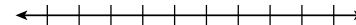
### Write an inequality to represent each situation.

- 1 A farmer weighs a dozen chicken eggs. The heaviest egg is 56 g.
- 2 A light bulb is programmed to turn on when the temperature in a terrarium is 72°F or cooler.

- 3 Martin is building a sandcastle at the beach. He pours no less than 5 cups of wet sand into each plastic mold.
- 4 The shortest tree in a park is at least 25.5 ft tall.

### Graph each inequality.

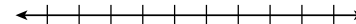
5  $n \geq -2$



6  $h \leq 5$



7  $t \leq 7.1$



8  $r \geq -\frac{2}{3}$



- 9 What is the difference between the inequality  $x \leq 5$  and the equation  $x = 5$ ?



## Writing numbers in expanded form (12 digits)

### Grade 6 Place Value Worksheet

Write each number in expanded form.

1. 56,168,208 \_\_\_\_\_  
\_\_\_\_\_
2. 33,987,806 \_\_\_\_\_  
\_\_\_\_\_
3. 69,457,549 \_\_\_\_\_  
\_\_\_\_\_
4. 32,332,336,214 \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
5. 1,051,158 \_\_\_\_\_  
\_\_\_\_\_
6. 9,057,406,104 \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
7. 24,000 \_\_\_\_\_  
\_\_\_\_\_
8. 84,250,001 \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
9. 576,385 \_\_\_\_\_  
\_\_\_\_\_
10. 90,017 \_\_\_\_\_  
\_\_\_\_\_

pg 32



## Multiplying 4-digit with 2-digit numbers

### Grade 6 Multiplication Worksheet

Find the product.

- |  |  |  |
|--|--|--|
| 1. $\begin{array}{r} 9,512 \\ \times 86 \\ \hline \end{array}$ | 2. $\begin{array}{r} 1,438 \\ \times 56 \\ \hline \end{array}$ | 3. $\begin{array}{r} 2,922 \\ \times 98 \\ \hline \end{array}$ |
| 4. $\begin{array}{r} 3,323 \\ \times 76 \\ \hline \end{array}$ | 5. $\begin{array}{r} 2,841 \\ \times 45 \\ \hline \end{array}$ | 6. $\begin{array}{r} 8,976 \\ \times 51 \\ \hline \end{array}$ |
| 7. $\begin{array}{r} 4,343 \\ \times 98 \\ \hline \end{array}$ | 8. $\begin{array}{r} 3,826 \\ \times 90 \\ \hline \end{array}$ | 9. $\begin{array}{r} 4,469 \\ \times 36 \\ \hline \end{array}$ |





## Exponents with whole number bases (harder)

### Grade 6 Exponents Worksheet

Solve the following exponents.

1.  $22^1 =$  \_\_\_\_\_
2.  $7^3 =$  \_\_\_\_\_
3.  $2^5 =$  \_\_\_\_\_
4.  $78^3 =$  \_\_\_\_\_
5.  $6^2 =$  \_\_\_\_\_
6.  $36^3 =$  \_\_\_\_\_
7.  $3^3 =$  \_\_\_\_\_
8.  $63^1 =$  \_\_\_\_\_
9.  $19^5 =$  \_\_\_\_\_
10.  $4^1 =$  \_\_\_\_\_
11.  $96^1 =$  \_\_\_\_\_
12.  $20^4 =$  \_\_\_\_\_



## Dividing Decimals by Whole Numbers

### Grade 6 Decimals Worksheet

Find the quotient.

1.  $0.61 \div 8 =$  \_\_\_\_\_
2.  $4.6 \div 2 =$  \_\_\_\_\_
3.  $4.2 \div 1 =$  \_\_\_\_\_
4.  $0.98 \div 1 =$  \_\_\_\_\_
5.  $0.35 \div 9 =$  \_\_\_\_\_
6.  $0.63 \div 4 =$  \_\_\_\_\_
7.  $0.74 \div 5 =$  \_\_\_\_\_
8.  $5.2 \div 4 =$  \_\_\_\_\_
9.  $0.85 \div 2 =$  \_\_\_\_\_
10.  $0.98 \div 9 =$  \_\_\_\_\_
11.  $0.82 \div 5 =$  \_\_\_\_\_
12.  $0.63 \div 6 =$  \_\_\_\_\_
13.  $8.7 \div 7 =$  \_\_\_\_\_
14.  $0.53 \div 2 =$  \_\_\_\_\_
15.  $0.16 \div 6 =$  \_\_\_\_\_
16.  $3.3 \div 4 =$  \_\_\_\_\_
17.  $7.9 \div 9 =$  \_\_\_\_\_
18.  $8.6 \div 6 =$  \_\_\_\_\_
19.  $0.90 \div 2 =$  \_\_\_\_\_
20.  $0.85 \div 6 =$  \_\_\_\_\_





## Adding with missing numbers

---

### Grade 6 Addition Worksheet

Find the missing numbers:

1. \_\_\_\_\_ + 91 + 5623 + 911 = 6630

2. 38 + 58 + 8798 + \_\_\_\_\_ = 9543

3. \_\_\_\_\_ + 1297 + 26 + 17 = 2011

4. 10566 = 849 + \_\_\_\_\_ + 62 + 97

5. \_\_\_\_\_ + 84 + 6997 + 225 = 7356

6. \_\_\_\_\_ + 956 + 6348 + 79 = 7399

7. \_\_\_\_\_ + 858 + 1048 + 85 = 2063

8. 7908 = 18 + 76 + \_\_\_\_\_ + 376

## Writing and Solving Inequalities *continued*

- 5 Helga signs up to coach hockey. She wants to make at least \$775 during the season. She gets \$200 at the start of the season and \$50 for each practice session she has. How many practice sessions does Helga need to have this season?

---

---

- 6 Logan has a budget of \$400 to have family pictures taken. There is a sitting fee of \$38. Prints cost \$25 per page. How many pages of prints can Logan order?

---

---

- 7 At TopLine's 50th anniversary celebration, managers and assistants earn custom-engraved plaques in recognition of their outstanding performance. TopLine purchased a total of 81 plaques for the event. The company gives 25 plaques to the managers and at least 2 plaques to each assistant. What is the maximum number of assistants at the event?

---

---

- 8 A cartoonist has 150 pieces of original artwork to give to his publishers and some fans who won his online contest. He plans to send 30 drawings to his publishers. He is sending at least 3 pieces of artwork to each contest winner. How many contest winners could there be?

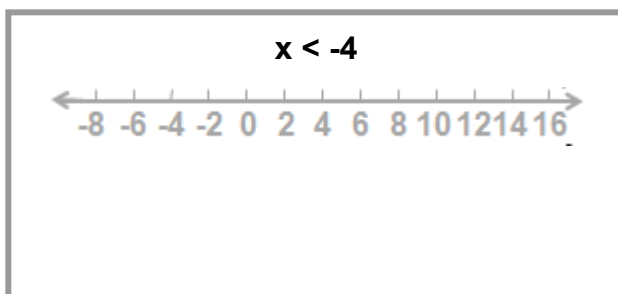
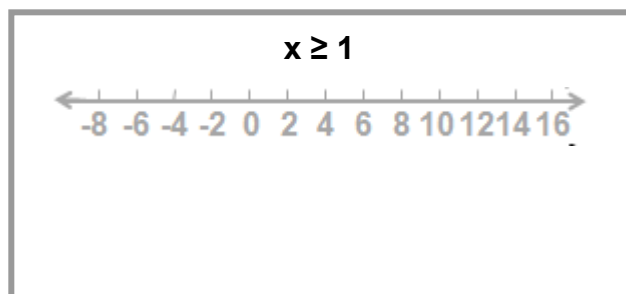
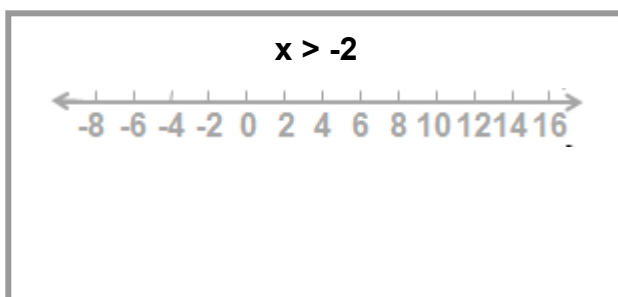
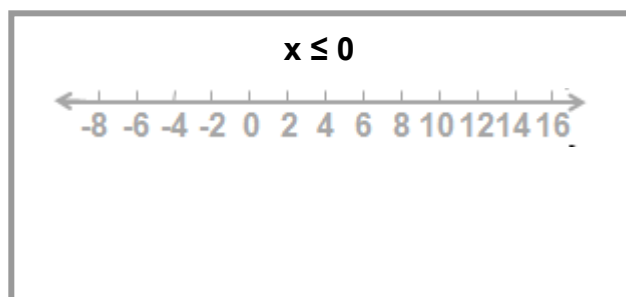
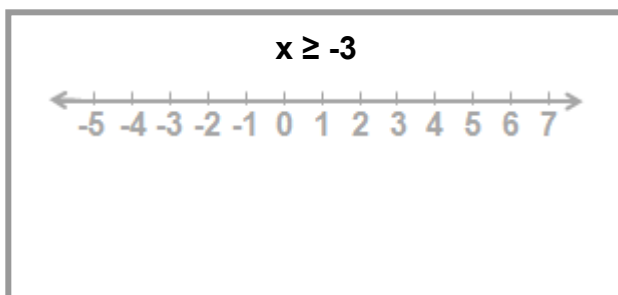
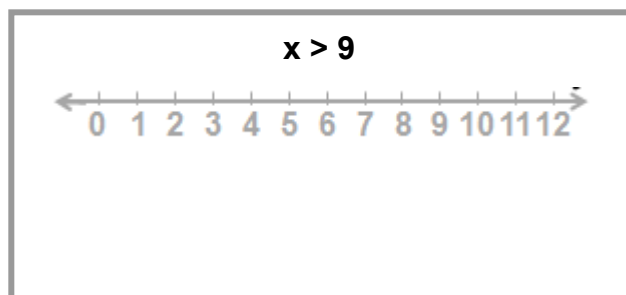
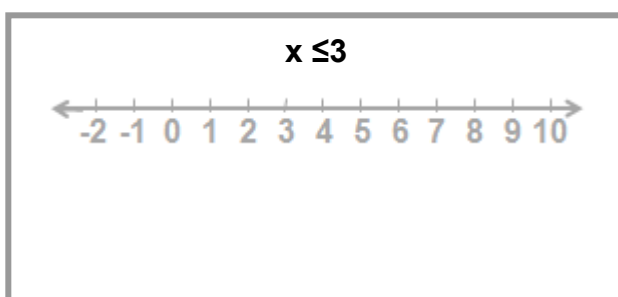
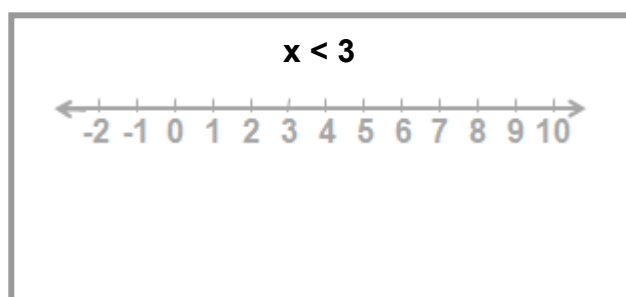
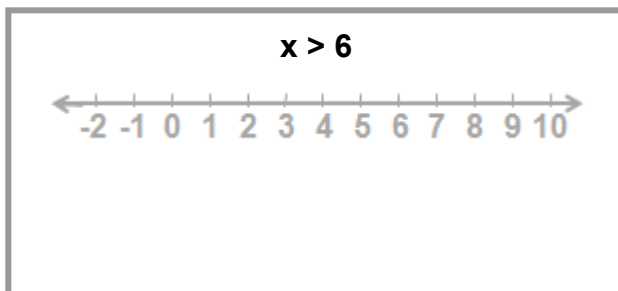
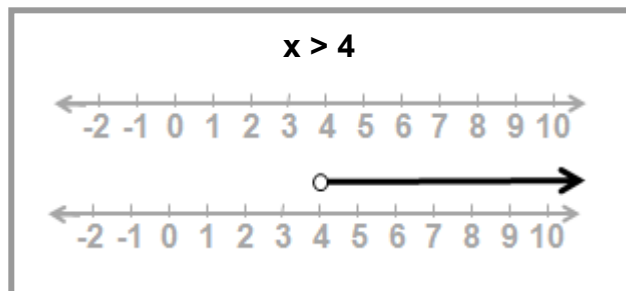
---

---

# Inequalities on number lines (page 1 of 2)

Name: \_\_\_\_\_

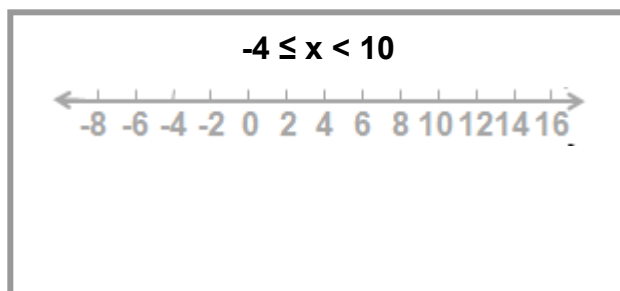
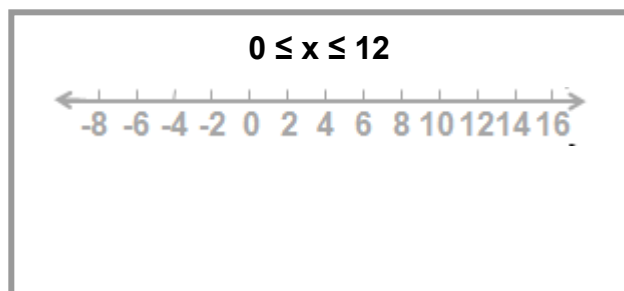
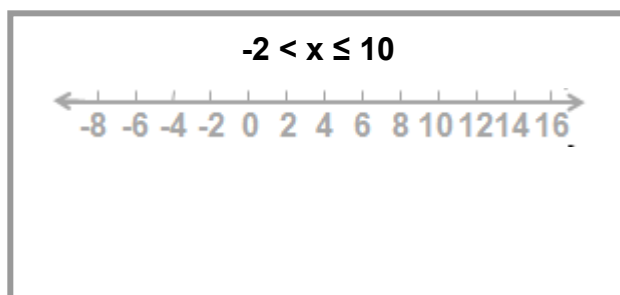
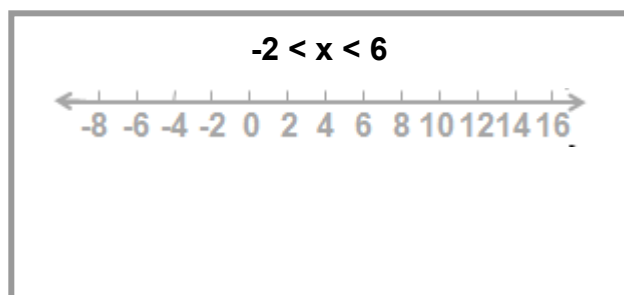
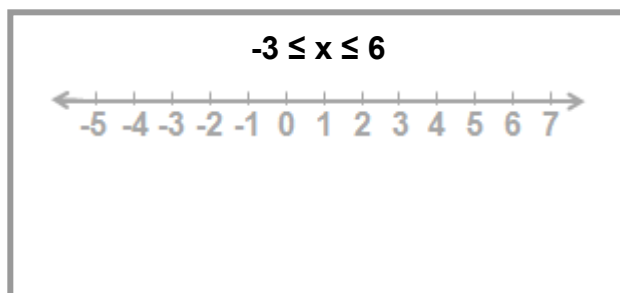
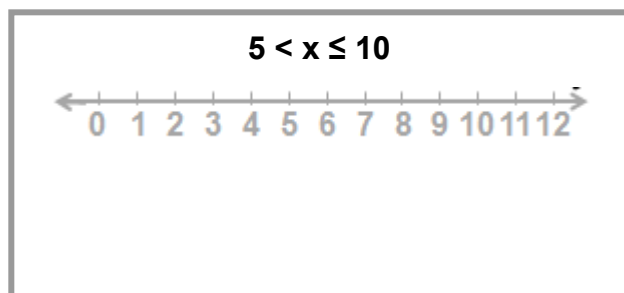
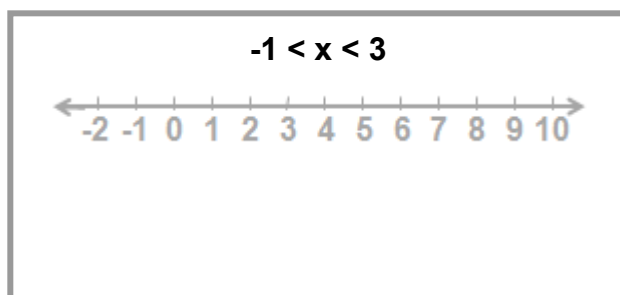
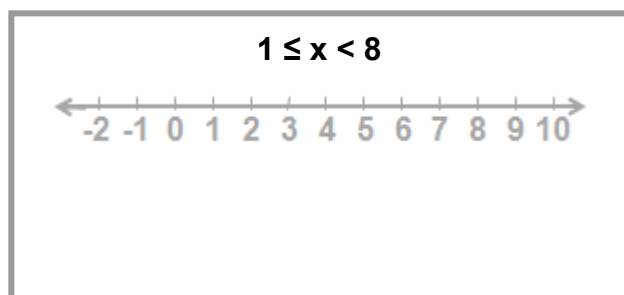
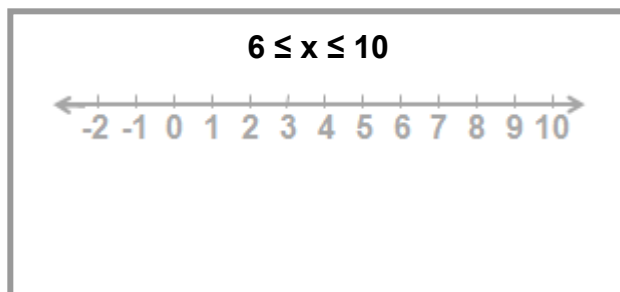
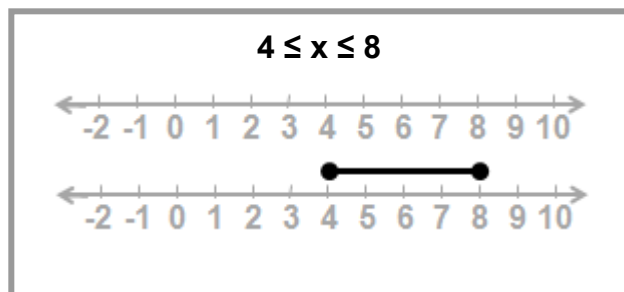
Show the solution to the inequalities on the number lines. Use a solid circle to indicate the number is included in the solution and use a circle outline if it is not. (the first one is done for you)



# Inequalities on number lines (page 2 of 2)

Name: \_\_\_\_\_

Show the solution to the inequalities on the number lines. Use a solid circle to indicate the number is included in the solution and use a circle outline if it is not. (the first one is done for you)



$\frac{1}{64} =$	$\frac{33}{64} =$
$\frac{1}{32} =$	$\frac{17}{32} =$
$\frac{3}{64} =$	$\frac{35}{64} =$
$\frac{1}{16} =$	$\frac{9}{16} =$
$\frac{5}{64} =$	$\frac{37}{64} =$
$\frac{3}{32} =$	$\frac{19}{32} =$
$\frac{7}{64} =$	$\frac{39}{64} =$
<b><math>\frac{1}{8} =</math></b>	<b><math>\frac{5}{8} =</math></b>
$\frac{9}{64} =$	$\frac{41}{64} =$
$\frac{5}{32} =$	$\frac{21}{32} =$
$\frac{11}{64} =$	$\frac{43}{64} =$
$\frac{3}{16} =$	$\frac{11}{16} =$
$\frac{13}{64} =$	$\frac{45}{64} =$
$\frac{7}{32} =$	$\frac{23}{32} =$
$\frac{15}{64} =$	$\frac{47}{64} =$
<b><math>\frac{1}{4} =</math></b>	<b><math>\frac{3}{4} =</math></b>
$\frac{17}{64} =$	$\frac{49}{64} =$
$\frac{9}{32} =$	$\frac{25}{32} =$
$\frac{19}{64} =$	$\frac{51}{64} =$
$\frac{5}{16} =$	$\frac{13}{16} =$
$\frac{21}{64} =$	$\frac{53}{64} =$
$\frac{11}{32} =$	$\frac{27}{32} =$
$\frac{23}{64} =$	$\frac{55}{64} =$
<b><math>\frac{3}{8} =</math></b>	<b><math>\frac{7}{8} =</math></b>
$\frac{25}{64} =$	$\frac{57}{64} =$
$\frac{13}{32} =$	$\frac{29}{32} =$
$\frac{27}{64} =$	$\frac{59}{64} =$
$\frac{7}{16} =$	$\frac{15}{16} =$
$\frac{29}{64} =$	$\frac{61}{64} =$
$\frac{15}{32} =$	$\frac{31}{32} =$
$\frac{31}{64} =$	$\frac{63}{64} =$
<b><math>\frac{1}{2} =</math></b>	

Solve the equations below and write the algebraic steps. The first one is done for you.

$$\frac{n}{7} = 6$$

$$x + 25 = 150$$

$$n - 18 = 99$$

$$\frac{n}{7} \times 7 = 6 \times 7$$

$$n \times 1 = 42$$

$$n = 42$$

$$\frac{n}{6} = 4$$

$$a + 157 = 200$$

$$6x = 72$$

$$x - 76 = 121$$

$$\frac{a}{7} = 3$$

$$6b = 36$$

$$n + 34 = 167$$

$$x - 99 = 99$$

$$\frac{a}{12} = 3$$

Solve the equations below and write the algebraic steps. The first one is done for you.

$$\frac{n}{7} = 6$$

$$5n = 20$$

$$\frac{n}{4} = 4$$

$$\frac{n}{7} \times 7 = 6 \times 7$$

$$n \times 1 = 42$$

$$n = 42$$

$$\frac{n}{6} = 4$$

$$\frac{n}{3} = 12$$

$$8x = 64$$

$$5x = 55$$

$$\frac{a}{4} = 8$$

$$6b = 42$$

$$\frac{n}{12} = 10$$

$$15x = 135$$

$$\frac{a}{4} = 7$$

*Solve the equations below and write the algebraic steps. The first one is done for you.*

$$n + 2 = 12$$

$$n + 2 - 2 = 12 - 2$$

$$n = 10$$

$$n + 8 = 14$$

$$n - 7 = 12$$

$$n - 15 = 33$$

$$n + 12 = 38$$

$$a - 14 = 12$$

$$b + 14 = 14$$

$$x - 23 = 87$$

$$n + 15 = 128$$

$$x + 25 = 40$$

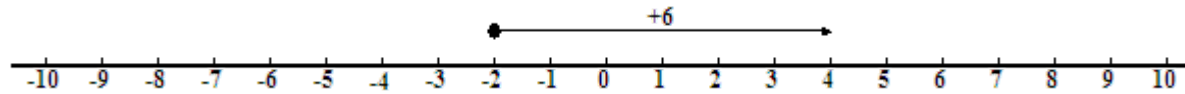
$$x - 28 = 96$$

$$a - 42 = 22$$

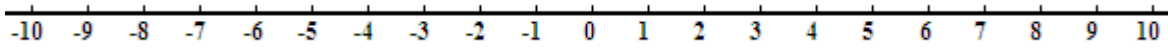


Use the integer line to answer the questions below. The first one is done for you.

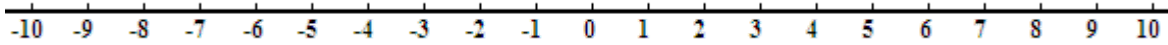
#1:  $-2 + 6 =$  4



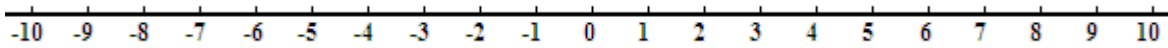
#2:  $-2 + 8 =$  \_\_\_\_\_



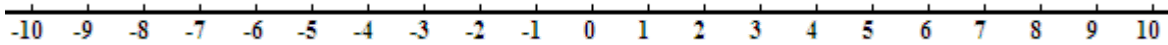
#3:  $-6 + 9 =$  \_\_\_\_\_



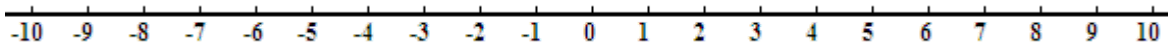
#4:  $-4 + 6 =$  \_\_\_\_\_



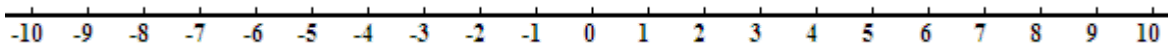
#5:  $-9 + 3 =$  \_\_\_\_\_



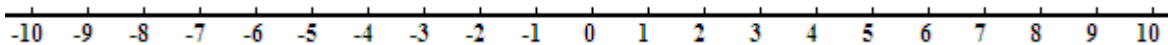
#6:  $-5 + 2 =$  \_\_\_\_\_



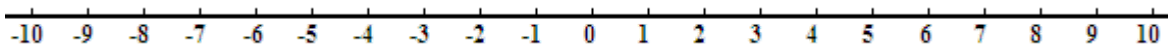
#7:  $2 + (-7) =$  \_\_\_\_\_



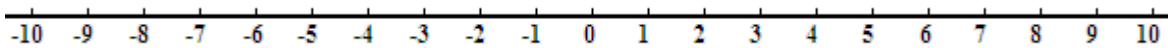
#8:  $6 + (-8) =$  \_\_\_\_\_



#9:  $-2 + (-5) =$  \_\_\_\_\_

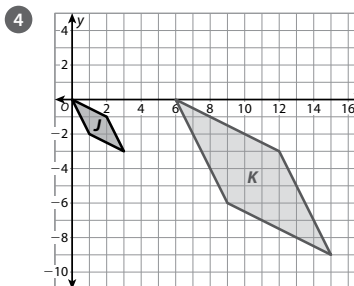
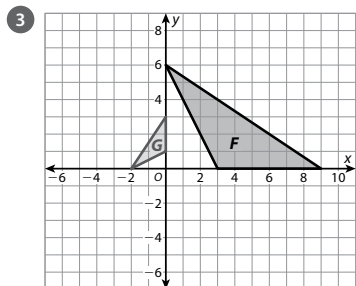
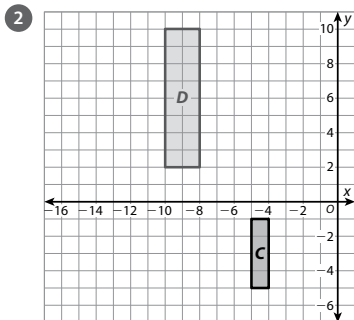
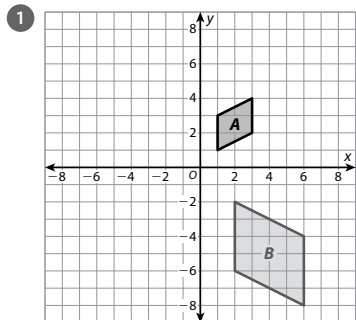


#10:  $-3 + (-2) =$  \_\_\_\_\_

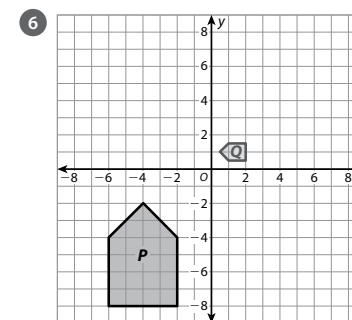
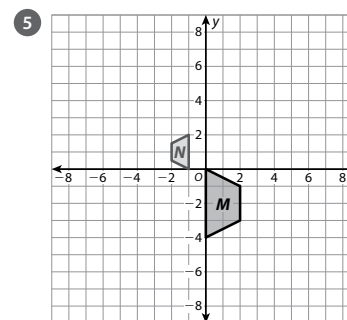


## Describing Sequences of Transformations Involving Dilations

- For each pair of figures, describe a sequence of three or fewer transformations that can be used to map one figure onto the other.



## Describing Sequences of Transformations Involving Dilations *continued*



- 7 Give an example of a sequence of transformations that can be performed in any order and will result in the same image.
- 8 Give an example of a sequence of transformations for which changing the order results in a different final image.

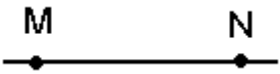
1. Circle the correct name for the lines and line segments below.



line segment DB

line DB

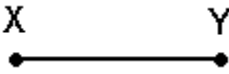
line segment BD



line segment M

line NM

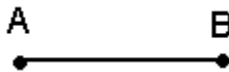
line segment N



line segment X

line XY

line segment XY



line segment AB

line AB

line segment B

2. Write *how many sides* and *how many vertices* the shapes below have.



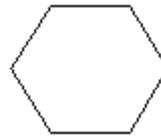
sides: \_\_\_\_\_ vertices: \_\_\_\_\_



sides: \_\_\_\_\_ vertices: \_\_\_\_\_



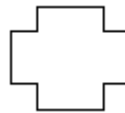
sides: \_\_\_\_\_ vertices: \_\_\_\_\_



sides: \_\_\_\_\_ vertices: \_\_\_\_\_



sides: \_\_\_\_\_ vertices: \_\_\_\_\_

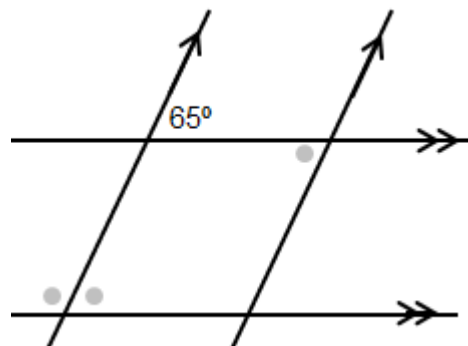
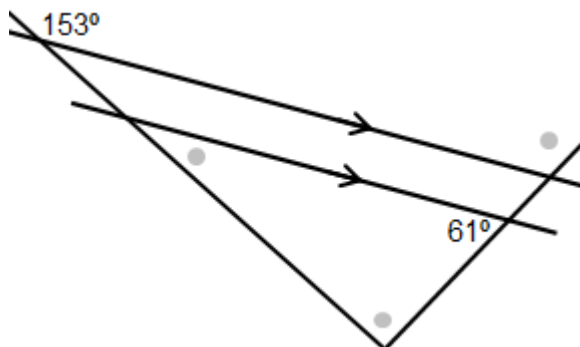
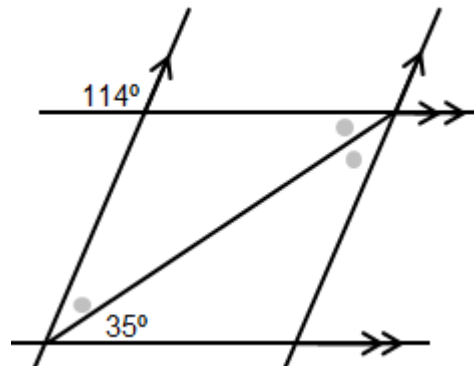
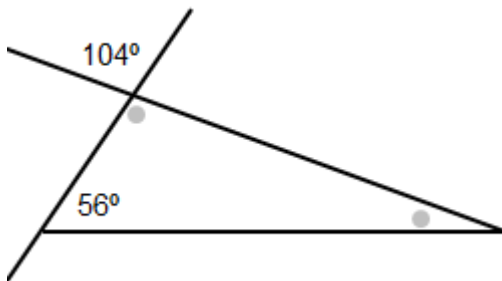
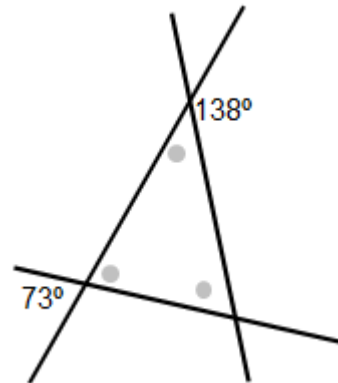
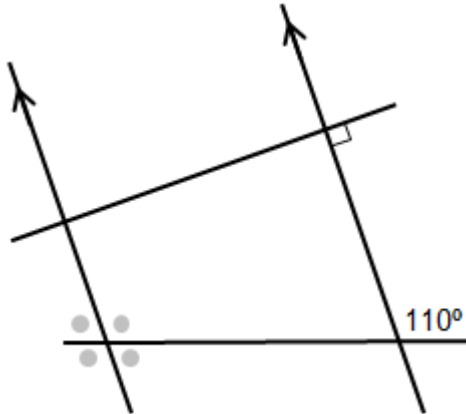


sides: \_\_\_\_\_ vertices: \_\_\_\_\_

## Missing Angles

Use what you know about complementary and supplementary angles together with the properties of triangles to calculate the missing angles (shown as dots.)

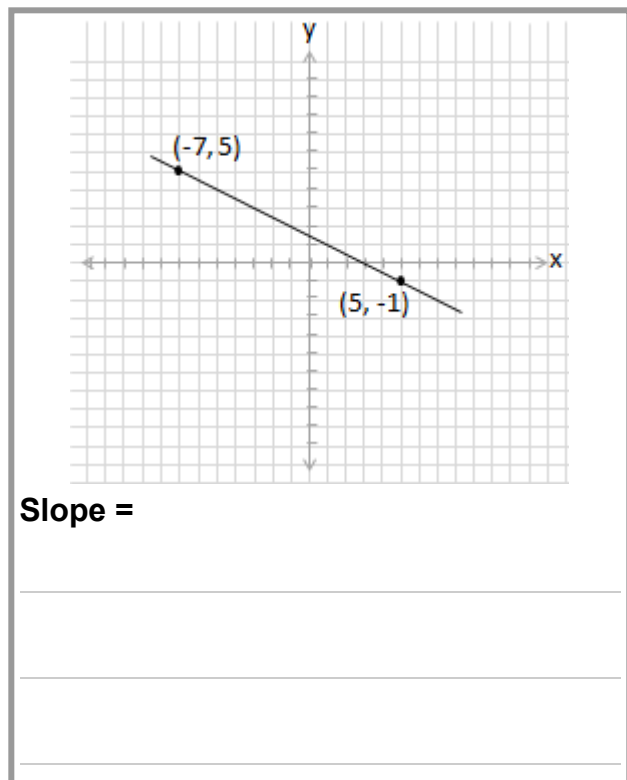
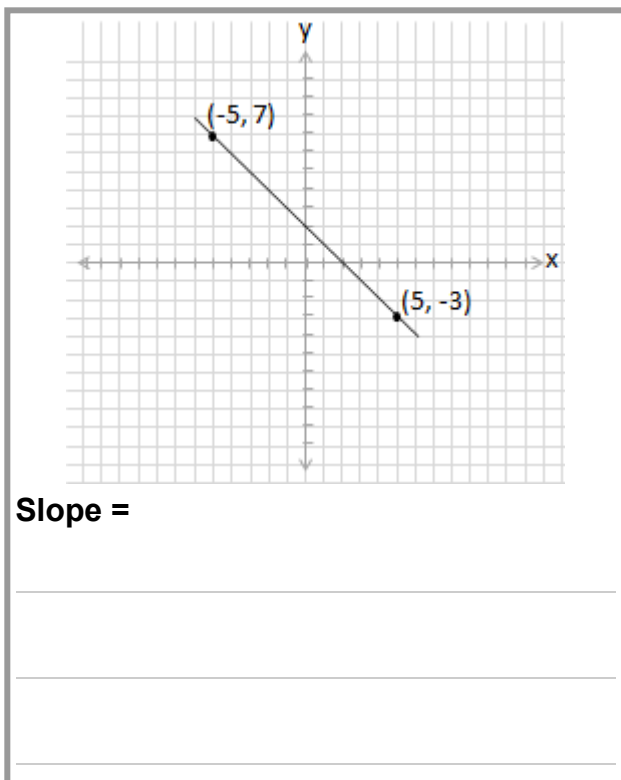
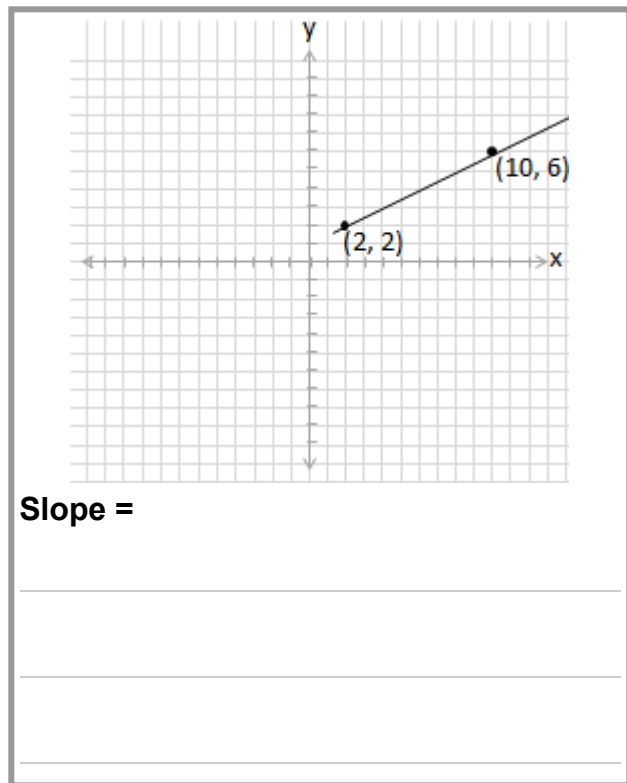
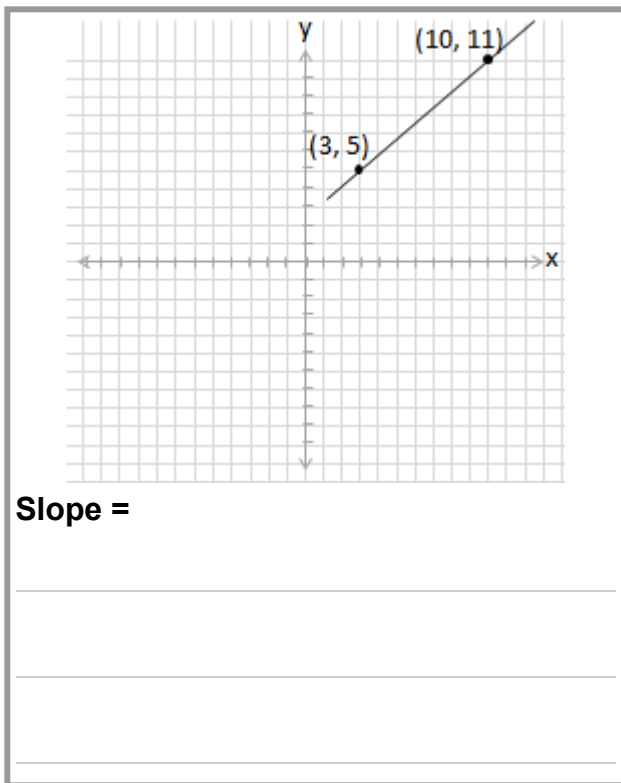
Name: \_\_\_\_\_



## Calculating Slope (page 1 of 2)

Name: \_\_\_\_\_

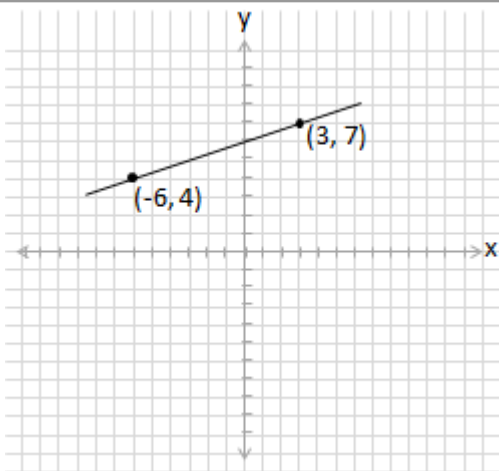
Calculate the slope of each the lines using the XY coordinates of the given two points.



## Calculating Slope (page 2 of 2)

Name: \_\_\_\_\_

Calculate the slope of the straight line between each set of two points.



Slope =

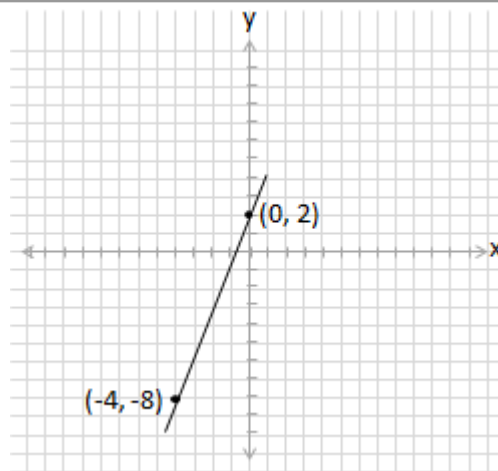
---



---



---



Slope =

---



---



---

Calculate the slope of the straight line between each set of two points.

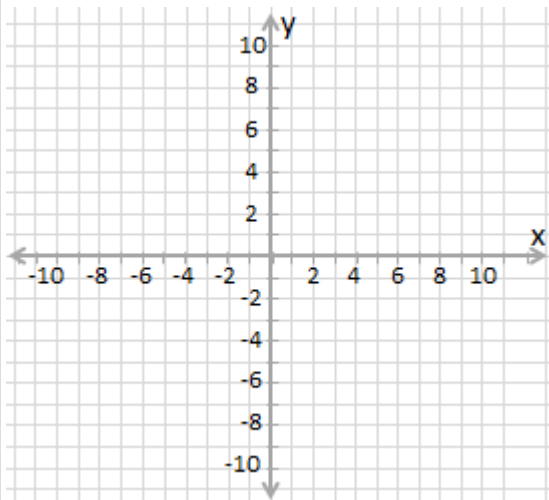
$(X_1, Y_1)$	$(X_2, Y_2)$	Slope
(1, 1)	(4, 7)	<hr/> <hr/> <hr/>
(1, 8)	(3, 0)	<hr/> <hr/> <hr/>
(-3, -8)	(0, -2)	<hr/> <hr/> <hr/>
(-8, -3)	(4, -6)	<hr/> <hr/> <hr/>

# Linear Equations - Slope Intercept Form (page 1 of 2)

Name: \_\_\_\_\_

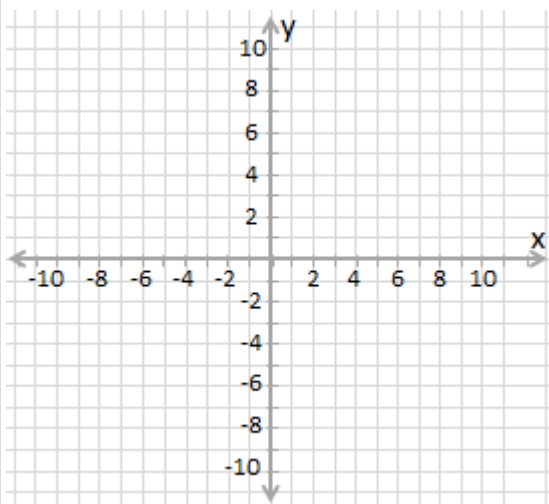
1. Use the equation  $y = -1.5x - 3$  to complete the table below and plot the values on to the coordinate grid below.

X	-8	-6	-4	-2	0	2	4
Y	—	—	—	—	—	—	—



2. (a) Plot the values from the table on to the coordinate grid below.

X	-6	-4	-2	0	2	4	6	8
Y	11	9	7	5	3	1	-1	-3



2. (b) Write the linear equation that defines the relationship between the X and Y values in the form  $y = mx + b$ . \_\_\_\_\_

## Linear Equations - Slope Intercept Form (page 2 of 2)

Name: \_\_\_\_\_

3. Determine the linear equation in slope intercept form ( $y = mx + b$ ) based on the tables of values below. (the first one is done for you)

x	0	1	2	3	4	$y = 2x + 5$
y	5	7	9	11	13	

Find the value of b: what is the value of y when  $x = 0$ ?  $b = 5$ ,

Then

1. Subtract 5 from any other y-value. e.g.  $11 - 5 = 6$ .
2. What must the corresponding x-value, 3 be multiplied by to equal 6?  $m = 2$
3. Repeat as a check with another y-value. e.g.  $7 - 5 = 2$ . Corresponding x-value 1 be multiplied by to equal 2?  $m = 2$

Or,

1. Pick any other point e.g. (2,9)
2. Substitute 2 and 9 for x and y in equation  $y = mx + 5$
3.  $9 = 2m + 5$
4.  $9 (- 5) = 2m + 5 (- 5)$
5.  $4 = 2m$
6.  $m = 2$

$$y = 2x + 5$$

x	0	1	2	3	4	$y = \_\_ x \_\_$
y	2	5	8	11	14	

x	-6	-4	-2	0	2	4	$y = \_\_ x \_\_$
y	-2	0	2	4	6	8	

x	0	1	2	3	4	5	$y = \_\_ x \_\_$
y	7	6	5	4	3	2	



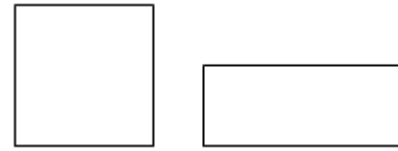


1. Which of the following is **not** a characteristic of similar figures?

- A. Proportional sides
- B. Equal angle measurements
- C. Same shape
- D. Congruent side lengths

---

2. Are the figures below similar? Explain.




---

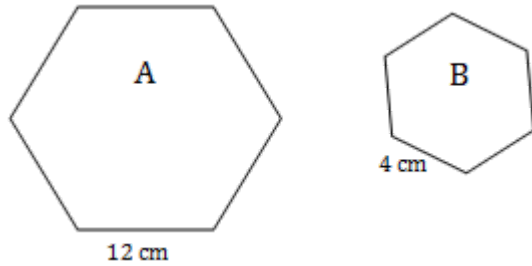


---



---

3. Explain why figures A and B are similar.




---

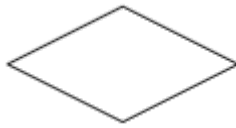


---

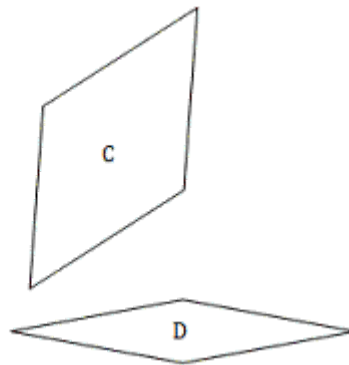
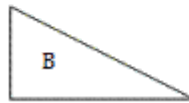
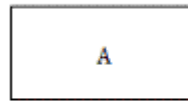


---

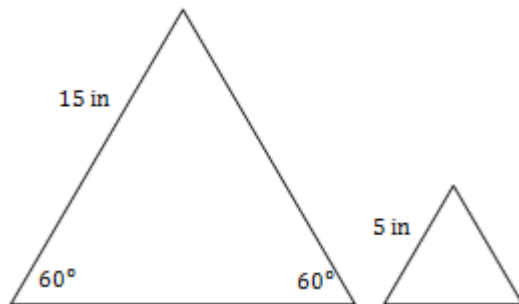
4. Which of the figures is similar to the one below?




---



5. If the figures below are proportional, what is true about the angles of the smaller figure?




---



---



---



---

## Hook Exercise: Harriet Tubman

**Directions:** The Underground Railroad (UGRR) was a network of people and safe houses. It helped slaves escape from the South and travel to Northern states and Canada. Below are a number of the code words used by participants that have been found in old letters and diaries.

EV

**Part One:** Match the code words with the terms that define them.

Code Word	Definition
Station Masters	Financial contributors
Depots or stations	The South
Conductors	Escape routes to the North
Cargo	Escape wagon, sometimes with a false bottom
Stockholders	Network members who supported and hid fugitives
Railroad Car	An escape mission or plan
Land of Egypt	Canada
New Canaan	Escorts who journeyed with fugitives
Exodus	Harriet Tubman's nickname
Moses	Safe houses, sometimes a barn or a secret room
Liberty Lines	Fugitives, escaped slaves

**Part Two:** Decode the sentence below by rephrasing it in your own words.

“It’s a long haul from Egypt to New Canaan. With the amount of cargo on board, Moses will need a string of depots and at least two or three conductors to make it through.”

## What Was Harriet Tubman's Greatest Achievement?

The place was Dorchester County, Maryland. The year was 1822, or thereabouts. The event: little Araminta Ross was born into slavery. From the beginning it was clear she was tough. At five years of age, Minty Ross was hired out to do child-care. By the age of twelve she was doing field work and hauling logs. In Minty's own words, "I grew up like a neglected weed."

Despite a loving mother, these were hard years. Like so many slaves, Araminta lived with the fear that she would be separated from her family. After the Atlantic slave trade ended in 1808, great pressure was put on Maryland's **Eastern Shore** to provide slaves for the cotton fields in the **Deep South**. Historians estimate that at this time 10% of young slaves in the **Upper South** were sold away from their families. We know that at least two of Minty's sisters met this fate.

In 1844, Minty married a free black man named John Tubman. This did not alter Minty's slave status but it did lead to a name change. Taking her mother's first name, and her husband's last, Minty Ross became Harriet Tubman.

When her master died in 1849, Harriet made a life-changing decision. "I had reasoned this out in my mind; there was one of two things I had a right to, liberty or death; if I could not have one, I would have the other." Harriet decided to run.

It was about one hundred miles from Harriet's slave home near Bucktown, Maryland, to the Pennsylvania border, and another twenty miles to Philadelphia. Unable to persuade her husband to join her, Harriet took off on her own.

She never disclosed the details of her escape. We know that it was mostly on foot, mostly traveling at night, mostly sticking to north-south streams and the woods. It is remarkable that she made it.

Over the next eleven years Harriet would return to the Eastern Shore and Virginia at least



eight times to escort other fugitive slaves to freedom. Complicating her task was the **Fugitive Slave Act**, known in the North as the **Bloodhound Act**. This act passed by Congress in 1850 required Northerners to turn in escaped slaves. Harriet now faced danger North and South.

In her trips to rescue slaves and transport them to Canada, Harriet did not work alone. She was part of a secret network known as the **Underground Railroad**. The "railroad" had no rails and except for the occasional hidden basement, it had no underground. Rather it was a series of safe houses strung out along routes that extended from the slave **border states** to Canada. The safe houses were owned by people, white and black, who hated slavery and hated the Fugitive Slave Act.

This Mini-Q includes documents on Harriet's work with the Underground Railroad. But Harriet Tubman's life, which stretched over ninety years, was larger than this. Examine all the documents. Consider the importance of each undertaking, the number of people helped, the risks involved, the time devoted. Then decide on your answer to the question, *What was Harriet Tubman's greatest achievement?*

EV

## Background Essay Questions

1. In what border state was Harriet Tubman born?
2. How did the expansion of cotton fields in the deep South affect young slaves on the Eastern Shore?
3. How old was Harriet when she escaped slavery?
4. Why did the Underground Railroad run all the way to Canada and not simply stop in the Northern free states?

5. Define or explain each of these terms:

Eastern Shore

Deep South

Upper South

Fugitive Slave Act

Bloodhound Act

Underground Railroad

border states

---

## Timeline

- 1822** – Possible birth date of Minty Ross (Harriet Tubman)
- 1850** – Harriet conducts first trip on Underground Railroad.
- 1850** – Fugitive Slave Act is passed.
- 1860** – Tubman conducts last trip on Underground Railroad.
- 1863** – Combahee River raid
- 1865** – End of Civil War
- 1890s** – Tubman active in women's suffrage movement.
- 1908** – Harriet Tubman Home for the poor dedicated in New York.
- 1913** – Harriet Tubman dies in Auburn, New York.

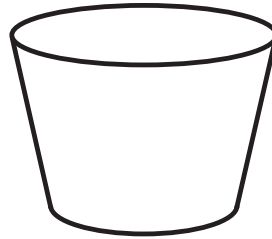
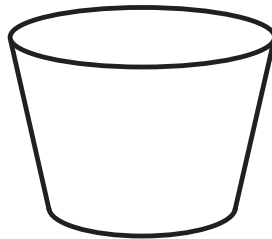
## Understanding the Question and Pre-Bucketing

1. What is the analytical question asked by this Mini-Q?
2. What terms in the question, if any, need to be defined?
3. Rewrite the question in your own words.

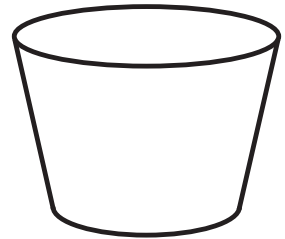
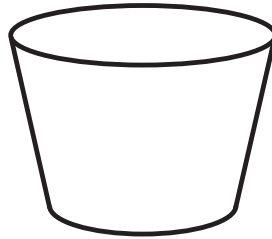
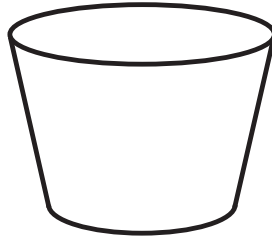
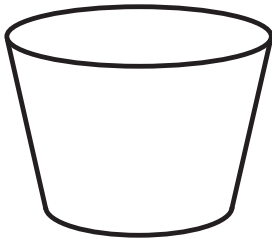
EV

### Pre-Bucketing

**Directions:** Using clues from the Mini-Q question, think of logical analytical categories and label the buckets. We suggest a two-bucket or a four-bucket framework. Can you envision how each might work?

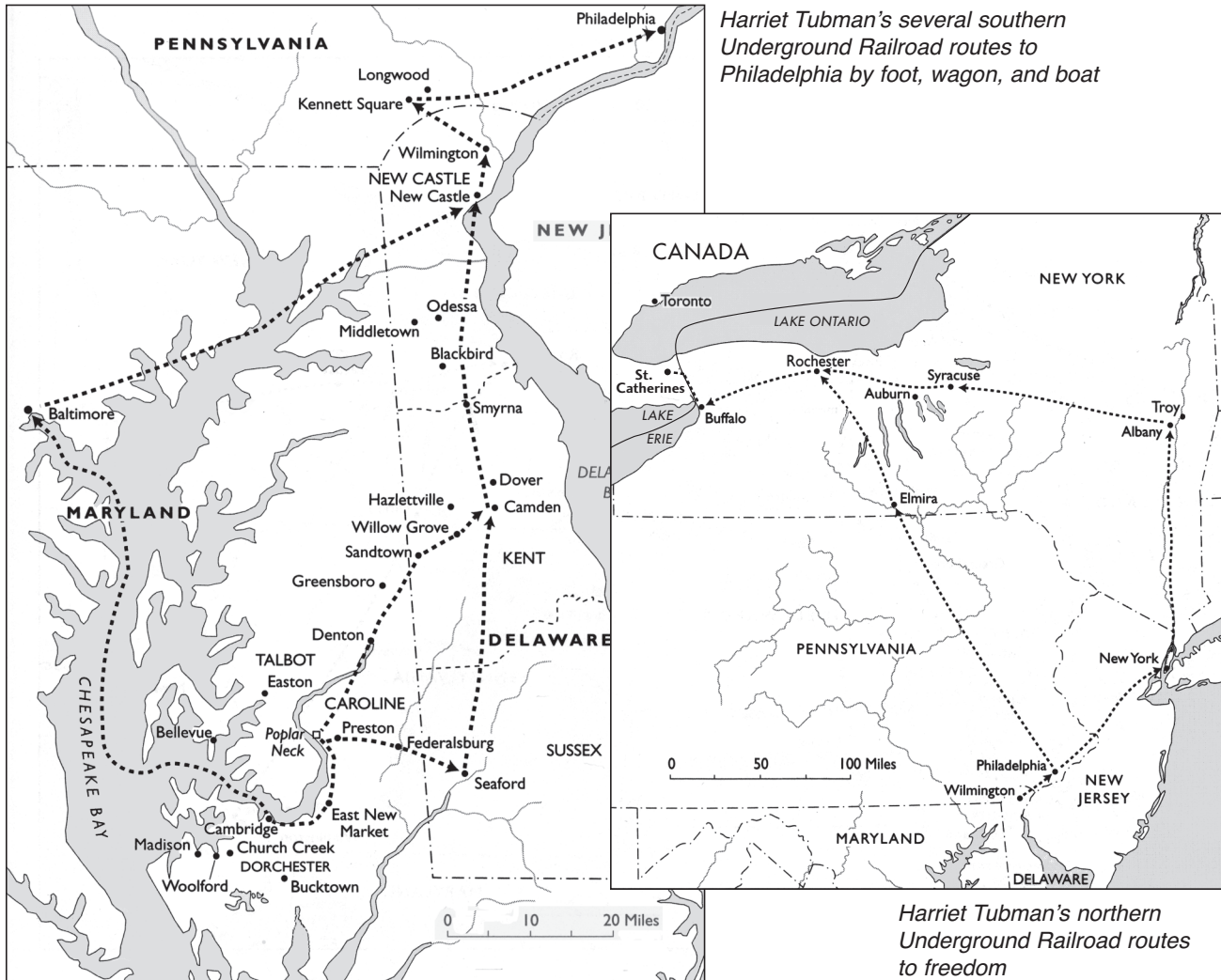


OR



## Document A

Source: Kate Clifford Larson, *Bound for the Promised Land*, 2004.



EV

### Document Analysis

1. Including place names, directions and distances, describe a route Harriet Tubman was likely to have followed from her slave home near Bucktown to Philadelphia.
2. Traveling by foot, about how many miles was it from Bucktown to Philadelphia? From Philadelphia to St. Catharines in Canada?
3. In the 1850s, why did Harriet feel compelled to escort her escaped slaves all the way to St. Catharines? Why, for example, didn't she stop in Albany?
4. In terms of risk or number of people helped, does this document provide evidence of a great achievement? Explain.

## Document B

**Source:** Adapted from *Harriet Tubman: The Road to Freedom* by Catherine Clinton, 2004.

**Note:** Records of Harriet Tubman's rescue missions are very incomplete. Trip estimates range from 8 to 19. She made most of her trips in and around December when the nights were long and fewer people were out. Typically, Harriet did not venture onto plantations but met fugitives at a prearranged place. When possible, "abductions" began on Saturday nights since slaves generally had a rest day Sundays and would not be missed until Monday morning.

EV

### Harriet Tubman's Rescue Missions

Date	Pick Up Point	End Point	Cargo
Dec. 1850	Near Baltimore, Md.	Philadelphia (?)	Niece Kizzy and 2 children
Spring 1851	Dorchester Co., Md.	Philadelphia (?)	One brother plus two men (?)
Fall 1851	Dorchester Co., Md.	Canada West (Ontario)	11 fugitives including brother
Fall 1852	Probable trip	Probable trip	Numbers Unknown
Fall 1853	Maryland	Niagara Falls area	9 fugitives
Dec. 1854	Caroline Co., Md.	St. Catherines, Can.	3 of Harriet's brothers
Summer 1857	Dorchester Co., Md.	St. Catherines, Can.	Harriet's mother and father*
Dec. 1860	Dorchester Co., Md	St. Catherines, Can.	7 fugitives (HT's last rescue)**

\*Parents were in danger because of sheltering fugitive slaves.

\*\*Most famous escape with drugged babies to prevent crying.

### Document Analysis

1. If Harriet was born in 1822, how old was she when she made her first and last rescue?
2. In what county and state did Harriet collect most of her slave fugitives?
3. According to this log, what is the total number of slaves Harriet escorted to freedom?
4. According to the Document Note, what measures did Tubman take to avoid capture?
5. In terms of risk, number of people helped, and length of time spent, does this document provide evidence of a great achievement? Explain.



## Document C

**Source:** Harriet Tubman, as told to her neighbor Emma Paddock Telford, circa 1905.

**Note:** About one year into the Civil War, Harriet Tubman was asked by the governor of Massachusetts to join Union troops in South Carolina. There she headed up a team of eight black spies to operate behind the lines and provide intelligence for a Union raid to free slaves. The raid was conducted on June 2, 1863. It involved three gunboats, and black troops led by a white officer, Colonel James Montgomery.

EV

When we went up the river in the morning, it was just about light, the fog was rising over the rice fields and the people was just done their breakfast and was going out to the field.

I was in the forward boat.... [T]he Colonel blew the whistle and stopped the boat and ... a company of soldiers went ashore. About a quarter of an hour after ... you could look over the rice fields, and see them [slaves] coming to the boat from every direction. I never see such a sight.... Some had bags on their back with pigs in them; some had chickens tied by the legs, and so child squalling, chickens squawking, and pigs squeeling they all came running to the gunboats....

... When they got to the shore, they'd get in the rowboat, and they'd start for the gunboat; but the others would run and hold on so they couldn't leave the shore.... They was afraid the gunboats [would] go off and leave them. At last the Captain looked at them and he called me.... "Moses, come here and speak a word of consolation to your people!"

Well, they wasn't my people any more than they was his – only we was all Negroes.... They didn't know anything about me and I didn't know what to say. I look at them about two minutes, and then I sung to them....

Come from the East, Come from the West  
Mong all the glorious nations,  
This glorious one's the best....

Then they throwed up their hands and began to rejoice and shout Glory! And the rowboats would push off.

I kept on singing until we brought all aboard. We got 800 people that day, and we tore up the railroad and fired the bridge, and we went up to a big house and caught two pigs and named the white pig Beauregard and the black pig Jeff Davis.

When we got back to Hilton Head in the morning ..., I took 100 of the men to the recruiting office and they enlisted in the army. Colonel Whittle said I ought to be paid for every soldier as much as a recruiting officer. But laws! I never done got nothing."

### Document Analysis

1. When and in what state was the Combahee River raid?
2. What role did Harriet play in the raid?
3. Colonel Montgomery called Harriet "Moses." Why do you suppose he gave her this Biblical name?
4. In terms of risk, number of people helped, length of time spent, and importance, does this document provide evidence that the Combahee River raid was a great achievement? Explain.

## Document D

**Source:** Sarah Bradford, *Scenes in the Life of Harriet Tubman*, 1869.

**Note:** Just seven weeks after the Combahee River raid, the all-black Massachusetts 54th made their mark on history with their assault on Fort Wagner in Charleston Harbor. Harriet Tubman served as a nurse for the wounded survivors of the 54th Massachusetts Volunteers. The assault on Fort Wagner was the subject of the 1989 Academy Award-winning film *Glory*. Below is Harriet's description of her nursing experiences, along with a comment from her biographer.

EV

*Harriet Tubman:* “Well, Missus, I’d go the hospital, I would, every morning. I’d get a big chunk of ice ... and put in a basin, and fill it with water; then I’d take a sponge and begin. First man I’d come to, I’d thrash away the flies, and they’d rise, they would, like bees round a hive. Then I’d begin to bathe the wounds, and by the time I’d bathed off three or four, the fire and heat would have melted the ice and made the water warm, and it would be as red as clear blood. Then I’d go and get more ice ... and by the time I got to the next ones, the flies would be round the first ones black and thick as ever.”

*Biographer Sarah Bradford:* In this way (Harriet) worked, day after day, till late at night; then she went home to her little cabin, and made about fifty pies, a great quantity of gingerbread, and two casks of root beer. These she would hire some contraband\* to sell for her through the camps, and thus she would provide her support for another day; for this woman never received pay or pension, and never drew for herself but twenty days’ rations during the four years of her labors (in the Civil War).

\*Contraband: An escaped slave taken in behind Union lines

### Document Analysis

1. When and where did Harriet do this Civil War nursing?
2. Who were the soldiers that Harriet nursed?
3. Without army pay, how did Harriet earn money to live?
4. How well were Harriet Tubman’s nursing efforts recognized by the Union army? Evidence?
5. In terms of risk, number of people helped, length of time spent, and importance does this document provide evidence that Harriet Tubman’s work as a nurse was a great achievement? Explain.

## Document E

**Source:** Schomburg Center for Research in Black Culture; photo circa 1885.

**Note:** During the 48 years between the end of the Civil War and her death in 1913, much of Harriet Tubman's time was spent taking care of poor people in her home. Harriet often had six to eight people in her care. "The aged, ... the babe deserted, the epileptic, the blind, the paralyzed, ... all found shelter and welcome," wrote neighbor Emma Telford in 1911.

EV



A group portrait of Harriet Tubman (far left), her second husband, Nelson Davis (seated, hat) and residents of her private home in Auburn, New York.

### Document Analysis

1. After the Civil War, what was the focus of Harriet Tubman's life?
2. Who did Harriet care for? For about how many years did she do this?
3. In terms of risk, number of people helped, length of time spent, and importance does this document provide evidence that Harriet Tubman's caregiving in Auburn was a great achievement? Explain.









**Marking the Text Overview:** As you read through your text, complete the following steps:

1. Number the paragraphs
2. Underline the main ideas
3. Highlight the key points that support the main ideas
4. Put a star by anything that is important
  - a. For example: evidence
5. Circle important vocabulary words AND words that you don't know
6. Put an exclamation mark next to anything that surprises you
7. Put a question mark next to anything that confuses you
8. Write comments or draw pictures in the margins on anything that helps you connect information you are reading to information you already know or have experienced

### A.C.E Writing Strategies Overview

<b>A</b>	<b>Answer the question</b>	<p>Take the question you are being asked and make it a statement while you answer it</p> <p>Example: Question: What is your favorite free time activity? Answer: My favorite free time activity is watching movies.</p>
<b>C</b>	<b>Cite Evidence</b>	<ul style="list-style-type: none"><li>• Use your previous experience, prior knowledge, or information from what you read to support your answer</li><li>• Try to use transitional words and phrases such as 'in fact,' 'especially,' 'such as,' and for instance'</li></ul> <p>Example: In fact, I like all genres of movies and watch them as often as possible.</p>
<b>E</b>	<b>Elaborate</b>	<ul style="list-style-type: none"><li>• Add more information to your evidence by explaining, comparing &amp; contrasting, showing cause &amp; effect, etc.</li></ul> <p>Example: In my opinion, watching movies is a great way to take a break from reality and enter a new world.</p>

### PUT IT ALL TOGETHER:

Question: What is your favorite free time activity?  
Answer:

My favorite free time activity is watching movies. In fact, I like all genres of movies and watch them as often as possible. In my opinion, watching movies is a great way to take a break from reality and enter a new world.



## Complete Summary Overview:

**Topic Sentence:** Use your own words to tell the reader the main idea of the reading.

**Body Sentences:** Use your own words to tell the reader about the most important details that support your topic sentence.

**Conclusion:** Use your own words to restate the topic sentence.

### Example:

In the article, "The Greatness of Electricity," author Michael Johnson explains the benefits of electricity. First, electricity allows us to use entertainment such as phones and televisions because it powers them. Second, electricity keeps us safe by enabling us to keep our food cold so it does not spoil. Last, electricity makes life comfortable by powering machines such as the dishwasher and heater. People benefit immensely from power electricity and we would have much different lives if we did not have electricity in our lives.

## Persuasive Essay Overview:

**Topic Paragraph:** Include a 'hook' sentence to grab the reader's attention. Include background information on the topic so the reader understands why it is important. Include a thesis statement where you take a position. List the 3 reasons why you support that position.

**3 Body Paragraphs:** Include ONE reason in each paragraph (these are the reasons you stated in your topic paragraph). Include evidence/details to support your reason and relate to the first sentence of this paragraph.

**Conclusion Paragraph:** Restate your thesis in different words. Summarize your three reasons for supporting your opinion.

**Timeline**



## Apples: The Health Benefits



You know that apples are juicy, sweet, and tasty. They are often thought of as a treat or dessert. But apples are an important part of your daily diet. Exciting research has shown that apples have the power to help keep you healthy! Scientists have also discovered that the more of them you eat, the healthier you can be.

### They Can Do That?

It's hard to believe that one fruit can pack such a punch. The truth is, many fruits and vegetables do. But lately scientists have been pretty excited about apple research. Eating apples has been shown to lower the risk of cancer, stroke, and heart disease. There really is truth to that old saying, "An apple a day keeps the doctor away." Here are some facts from research done throughout the world:

- **Cancer:** Laboratory work at Cornell University in Ithaca, New York, found that certain nutrients in apples slow the growth of colon and liver cancer cells. And researchers in Hawaii studied lung

cancer patients and another group that was cancer-free. They found that eating apples kept the risk of lung cancer low.

- **Stroke:** Researchers in Finland studied more than 9,000 men for 28 years and found that those who ate lots of apples had a low risk of stroke. A stroke happens when a blood clot in the brain causes damage or when there is bleeding in the brain.
- **Heart disease:** At the University of California- Davis, researchers found that eating apples kept "bad," or LDL, cholesterol from harming the body. LDL cholesterol causes changes in the arteries. These changes are the buildup of *plaque* (PLAK) on the inside walls of the arteries. Plaque can lead to blood clots and heart attacks. A heart attack is like a stroke, only the damage occurs in the heart.

Other studies showed that people who ate apples regularly had better lung function. Their risk of dying from a heart attack was lower too.

Apples also help in digestion because they contain enzymes to help break down the food you eat. A fat-free food, one medium-size apple has only about 80 calories.

They also have fiber--a medium-size apple has about 5 grams of fiber if you eat the skin too. Dietitians recommend we get from 20 to 25 grams of fiber per day. The type of fiber in apples is called *pectin* (PECK-tin). Studies in Italy, Ireland, France, Finland, and the United States proved that this type of fiber is what helps reduce cholesterol in the blood.

And if that's not enough, munching on apples helps you clean your teeth and massages your gums for a healthy mouth. Can't brush your teeth after lunch? Eat an apple!

### Full of Phytochemicals

What is the "magic" nutrient in apples? It's actually more than one nutrient. Apples are rich in *phytonutrients* (fy-toe-NEW-tree-ents), also called *phytochemicals* (fy-toe-KEM-ih-kulz). Phyto means they come from plants. So phytochemicals are natural chemicals found in plants. They are found in the flesh and the skin of apples, but are more highly concentrated in the skin. Apple juice is also rich in phytochemicals, but it doesn't have the benefit of fiber.

Apples are loaded with vitamins and minerals, including *potassium* (puh-TASS-ee-um) and vitamin C. Phytochemicals are *antioxidants* (an-tee-OX-i-dents). They reduce or prevent cell and tissue damage from molecules in your body called free radicals. Free radicals form in the body every day as you breathe, eat, and exercise.

These phytochemicals are important; one has been especially linked to a reduced risk of cancer and heart disease.

Apples alone can certainly pack a nutritional punch. But together with other fruits, they can do even more. In a French study, scientists found that apples and oranges work well together, because the apples help the body use more of the vitamin C in the oranges. Your best bet is to eat lots of different fruits and vegetables each day. The recommended daily amount is at least five servings. An apple is one serving, so do try to eat at least one each day.

# The Core of the Matter

Studies on apples are still being done. We already know a lot about their benefits. In the future, we'll know even more, including how to combine them with other foods for the maximum nutritional wallop. Until then, eat as much of this healthy grab-and-go food as you can!

## Recipes

Here are two easy recipes that will make it even easier to eat an apple (or more) a day.

### Apple Sandwich

1. Cut an apple into very thin slices.
2. Spread peanut butter on slices of bread.
3. Place the apple slices on the peanut butter.
4. Add a slice of mozzarella cheese.
5. Sprinkle with cinnamon (optional).
6. Put the slices of bread together.
7. Eat your apple sandwich!

### The Frost Apple

- 1 pint of frozen vanilla yogurt
- 1 quart naturally sweet apple cider
- Freshly ground nutmeg

Let frozen yogurt soften at room temperature, or microwave it for 20 seconds. Put the yogurt and cider into a blender or food processor and blend until frothy and well mixed. Stir in nutmeg. Pour into tall glasses. Sprinkle nutmeg on top. Makes six 1-cup servings.

### Go Apple "Picking"

See how many different kinds of apples you can pick out at the grocery store. Check off the ones you find on the list below. How many different kinds did you find? How many have you tried? Which is your favorite? How many different kinds did the class find?

- Braeburn
- Cameo
- Cortland

- Crispin
- Empire
- Fuji
- Gala
- Ginger Gold
- Golden Delicious
- Granny Smith
- Honeycrisp
- Ida Red
- Jonagold
- Jonathan
- McIntosh
- Pink Lady
- Red Delicious
- Rome Beauty
- Winesap
- York Imperial

# cancer

can · cer

## Definition

### noun

1. a disease in which certain cells grow much faster than they should. Cancer can affect many different body parts, such as the lungs, breasts, and brain.

## Advanced Definition

### noun

1. any of various diseases characterized by malignant tumors or other tissue degeneration that can spread locally or through the lymph or blood systems.
2. any destructive force or thing that spreads slowly.
3. (cap.) a spring zodiacal constellation located between Gemini and Leo; Crab.
4. (cap.) the fourth sign of the zodiac, which the sun enters about June 21.
5. (cap.) a person born under this sign, between June 21 and July 20.

## Spanish cognate

*cáncer*: The Spanish word *cáncer* means cancer.

## These are some examples of how the word or forms of the word are used:

1. Sometimes, people get lung disease or lung **cancer**. It is very important to take good care of your lungs.
2. Kimberly's brother has a disease, or an illness, called **cancer**. He has to stay at a hospital in San Diego.
3. Using sunscreen regularly is also very important. The sun is probably one of the skin's biggest enemies. It can cause skin **cancer** or painful burns.

# damage

dam · age

## Definition

### noun

1. harm or injury that makes something less useful or valuable.

*The storm caused damage to many houses.*

### verb

1. to harm or injure.

*Insects damaged the crops.*

*The movers damaged some furniture.*

## Advanced Definition

### noun

1. harm or injury that reduces usefulness, value, or soundness.

*Damage to crops caused by insects raised the price of bread and flour.*

*The accident caused a lot of damage to our car.*

*They will have to pay for the damage they did to our front window.*

2. (pl.) in law, money claimed or paid as compensation for injury or loss.

*He sued for \$10,000 in damages.*

### transitive verb

1. to harm or injure; cause loss of usefulness, value, or soundness.

*Lies in the press damaged her reputation.*

*Smoking damages your lungs.*

*The flood damaged all these wonderful old buildings.*

### intransitive verb

1. to become harmed or injured.

*A flimsy airplane damages easily.*

**These are some examples of how the word or forms of the word are used:**

1. The ancient paintings must be treated with care so they're not **damaged**.
2. A pesticide is a chemical designed to kill insects and other pests that **damage** plants and crops.
3. Over time, constant stress from anxiety can **damage** your health, says Elizabeth Carll, a psychologist in Huntington, N.Y.
4. On Earth, every time you run or pick up a heavy object, your bones experience tiny amounts of **damage**.
5. When brain cells are lost, dementia (dih-MEN-shuh) is the result. Bleeding or blood clots in the brain can also cause this **damage**.
6. While the dangers of losing bees, such as the **damage** to our food supplies, have long been known, researchers are uncovering even more distressing information about the loss of these ecologically crucial insects.
7. Safety at the Hoover Dam is a top priority as the workers there constantly inspect the dam for **damage**. There have been very few incidents since the dam opened nearly eighty years ago.
8. "The attack yesterday on the Hawaiian Islands has caused severe **damage** to American naval and military forces. Very many American lives were lost. In addition, American ships have been reported torpedoed on the high seas between San Francisco and Honolulu."
9. A group of Japanese planes had orders to bomb the Nevada, which was docked at the northern end of Battleship Row, east of Ford Island. The Nevada was docked near the USS Arizona, which was heavily **damaged** in the attack.
10. Moreover, by studying the severity and duration of earthquakes, and by understanding the range of effects that earthquakes can have in terms of **damage** and other related hazards, we can be ready for the full range of consequences when earthquakes do strike.

**disease**                      dis        ·        ease**Definition****noun**

1. a condition that causes harm to a person's health.

*Many diseases are caused by germs.*

**Advanced Definition****noun**

1. an abnormal physical or mental condition that causes an organism to function wrongly; illness; sickness.

*He died of a rare disease of the lung.*

*Influenza is a contagious disease.*

*It can take months to recover from this disease.*

*Doctors have found a new way to treat this disease.*

*It is not known how he contracted the disease.*

2. any condition, as of society, that is considered deranged, irrational, or abnormal.

*These vicious crimes reflect the disease of our society.*

**These are some examples of how the word or forms of the word are used:**

1. Eating apples has been shown to lower the risk of cancer, stroke, and heart **disease**.
2. Spiders eat mosquitoes and other insects that harm farmers' crops and carry **diseases**.
3. Kimberly's brother has a **disease**, or an illness, called cancer. He has to stay at a hospital in San Diego.
4. Livingstone also had to watch out for deadly **diseases**. Malaria was a **disease** that killed many in Africa.
5. **Disease** swept through the population. Out of the 214 settlers who were alive when Captain Smith left, only 60 had survived.
6. Cloning humans would help us learn. We could learn more about how people develop. That could lead to preventing and curing **diseases**.

7. What happened to the Incas? When Europeans came to the New World in search of wealth, they brought a **disease** with them called smallpox that would kill thousands of people.
8. Julie Louise Gerberding is a doctor. In 2002, she became the director of the Centers for **Disease** Control and Prevention. That group helps protect Americans across the country from **disease**.
9. A **disease** called cholera was an especially big problem. In the days of the Oregon Trail, cholera had no cure. Once someone showed the slightest symptom of illness, he or she could die within a few hours.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

1. According to the text, what is a reason that apples are an important part of a healthy diet?

- A. Apples contain vitamin K, which you can't get from any other food.
- B. Apples have enzymes that help break down food.
- C. Apples clean your teeth so you never need to brush them.
- D. Apples have all of the fiber that a person needs in a day.

2. What is a way that the author asks the reader to analyze the list of apple types?

- A. See how many kinds of apples grow in the reader's state.
- B. See which kind of apples taste the best in homemade pie.
- C. See how many kinds of apples the reader can find in the store.
- D. See how many kinds of apples the reader can taste at school.

3. Apples can provide several different beneficial vitamins and minerals to the body when you eat them.

What evidence from the text supports this conclusion?

- A. "Researchers in Finland studied more than 9,000 men for 28 years and found that those who ate lots of apples had a low risk of stroke."
- B. "Other studies showed that people who ate apples regularly had better lung function. Their risk of dying from a heart attack was lower too."
- C. "Apples alone can certainly pack a nutritional punch. But together with other fruits, they can do even more."
- D. "Apples are loaded with vitamins and minerals, including potassium (puh-TASS-ee-um) and vitamin C."

4. If given the choice between eating a whole apple and drinking a glass of apple juice, which would be healthier?

- A. the apple juice, because it tastes better
- B. the whole apple, because the skin contains fiber
- C. the apple juice, because it has phytochemicals
- D. the whole apple, because it is a fat-free food

5. What is the main idea of this text?

- A. Apples are the best food in the world and should be eaten at every meal and snack.
- B. Apples come in over 50 types, each with unique benefits to your health.
- C. Apples keep doctors away, so people that eat them never worry about getting sick.
- D. Apples are an important part of a healthy diet and can prevent some diseases.

6. Read this sentence from the text.

Other studies showed that people who ate apples regularly had better lung **function** .

In the sentence, what does the word "**function**" mean?

- A. sleep
- B. event
- C. food
- D. activity

7. Choose the word that best completes the sentence.

Apples are an important part of your daily diet, \_\_\_\_\_ they should not be the only food you eat!

- A. because
- B. when
- C. so
- D. but

8. Explain why there is truth to the saying, "An apple a day keeps the doctor away." Use evidence from the text to support your answer.

9. Why would the author include recipes in the text? Use evidence from the text to support your answer.



## Shock Waves

by Kirsten Weir

### A new theory explains a surprise series of earthquakes.

Beds shook suddenly across New York City the night of Dec. 16, 1811, rousing people from their sleep. The cause of the rude awakening was an earthquake whose *epicenter* (point of origin) was halfway across the country near New Madrid, MO.

The earthquake was one of a series in 1811 and 1812 that uprooted trees, triggered landslides, and toppled log cabins across the Midwest. Scientists have evidence that huge quakes also hit the same region around the years 1450 and 900. The cause of the New Madrid earthquakes has long mystified scientists. Have they now found an answer?



The Granger Collection; Waves: Shutterstock

*These old illustrations of thrashing waves and a ruined building depict the destruction caused by the 1811 and 1812 New Madrid earthquakes.*

### Puzzle Pieces

Most earthquakes happen at the boundaries of *tectonic plates*. Tectonic plates are enormous pieces of Earth's crust and upper mantle that fit together like pieces in a jigsaw puzzle. Wherever two plates meet, they either pull apart, press together, or slide past each other. Those movements cause large *faults* (cracks) to appear in the crust near the plate boundary.

The ground on either side of a fault moves very gradually. But sometimes the two sides get hung up on each other, unable to move. Stress builds to a point at which the two sides eventually snap apart, sending shock waves through the ground. Those shock waves are better known as earthquakes.



North Wind Picture Archives

California is the country's most quake-prone state. It lies atop a boundary where the Pacific Plate meets the North American Plate. Those plates are sliding past each other in opposite directions. That movement has created a lot of faults.

The New Madrid faults are different. They lie in the center of the North American Plate, far from any plate boundary. Why would huge earthquakes occur there? Earth scientists have been asking that question since 1812. Now a team of researchers that includes Andrew Freed, a professor of earth sciences at Purdue University, has a theory.

### Losing Weight

The New Madrid faults lie atop the *Reelfoot Rift*. A rift is a region where Earth's crust is being pulled apart by the slow movement of tectonic plates. Hundreds of millions of years ago, tectonic forces almost pulled the North American Plate in two. For some reason, Freed says, that action stopped. The North American Plate is no longer cracking apart. But the Reelfoot Rift remains as evidence of that ancient upheaval. It's a "dead rift," says Freed, "a zone of weakness."

The New Madrid faults lie along that weak zone in the crust. But the presence of a weak zone doesn't fully explain the New Madrid quakes. In California, stress builds up in the rocks because the two tectonic plates there are constantly in motion. How could so much stress build up such a long way from any plate boundaries?

To find out, Freed and his colleagues studied the New Madrid faults for 10 years. They used Global Positioning System (GPS) sensors to track any tiny movements of the Earth's crust. "It's just like the GPS in your car or in your cell phone, but it's a much more precise measurement," Freed says.

They expected to see the ground slowly twisting and turning, causing stress to build up in the rocks. That's not what they found. "After 10 years, we realized there's nothing happening," he says. "No

force is building up. So why do you get earthquakes?"

The stress, Freed now believes, must have been left from geological processes that happened long ago. It had probably been stored underground for millions of years-until something let it out.

Freed and his colleagues have an idea what that "something" was. During the last Ice Age, the northern half of North America was covered by an enormous ice sheet. Between 16,000 and 10,000 years ago that ice sheet melted, sending torrents of water down the Mississippi River. The river has carried bits of rock with it ever since. In time, says Freed, "it removed a lot of rock from the surface."

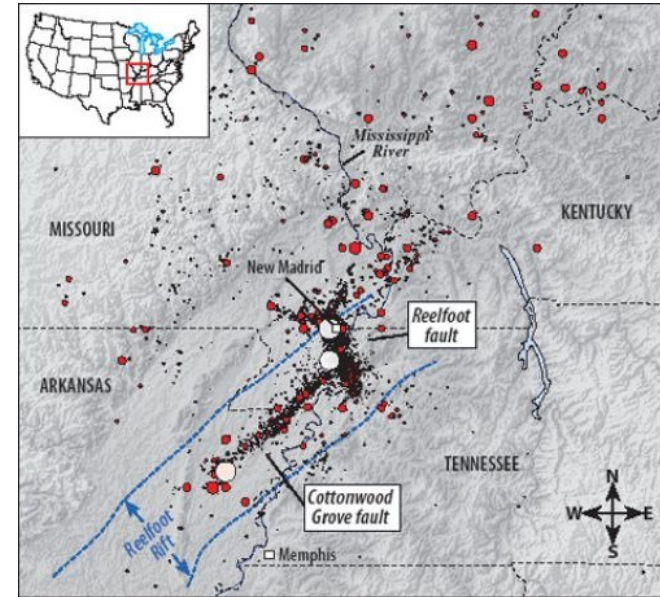
That removal was significant, he says, because the Reelfoot Rift lies right below the Mississippi River. The weight of the ground above the rift had been pressing down on the New Madrid faults, holding back the stored-up stress for millions of years. As the river washed away the ground, a huge weight was lifted from Earth's crust. As that pressure eased, the faults slipped several times, triggering the New Madrid quakes.

## High-Risk Zones

Finding solid proof for that theory is difficult, Freed says. Still, the theory goes a long way toward explaining earthquakes that happen in the middle of North America.

There's good reason to understand such a system. For one thing, Freed says, the Mississippi is still changing Earth's crust. More earthquakes could strike the New Madrid area as more age-old stresses are released. Similar changes could be happening elsewhere. "We know there are other rifts under other river valleys around the country," he says.

Many of those places haven't experienced earthquakes in recent history. If Freed's theory is correct, other faults may be lying quietly, getting ready to rock.



Andrew Freed/Purdue University

*The major earthquakes that have rattled the Midwest several times in history can be traced to a region, the Reelfoot Rift, where the ground is weak and riven by large faults (cracks). Sudden movements of those faults have triggered many small quakes over the years. The epicenters of those quakes are indicated by the black and red dots on the map. The big white dots indicate the epicenters of the monster quakes that happened in 1811 and 1812.*

# indicate                      in                      di                      cate

## Definition

### verb

1. to show or point out.

*Can you indicate your street on the map?*

## Advanced Definition

### transitive verb

1. to show or point out.

*The police officer asked her to indicate the man she thought was the attacker.*

*The results of the study indicate that their hypothesis was correct.*

2. to signify or serve as a token, index, or sign.

*The presence of a fever usually indicates illness.*

*The expression on his face indicated great displeasure.*

3. to briefly state or express.

*Please indicate your choice by putting a check mark in one of the boxes.*

*We had to put our pencils down when the proctor indicated that time was up.*

*You use your turn signals to indicate your intention to turn.*

## Spanish cognate

*indicar*: The Spanish word *indicar* means indicate.

---

## These are some examples of how the word or forms of the word are used:

1. The five-minute bell **indicating** lunch was almost over rang. Jessica sniffed and felt her eyes well up with tears.
2. Ecological **indicators** are showing some improvements. The crayfish population is up. Wading and migratory birds have improved their nesting habits.
3. Africa and South America are thousands of miles apart, but share very similar rock layers and

ReadWorks.org · © 2020 ReadWorks®, Inc. All rights reserved.  
Definitions and sample sentences within definitions are provided by Wordsmyth. © 2015 Wordsmyth. All rights reserved.

patterns. These shared rock layers and patterns may **indicate** that the two continents (and their rocks) used to make up one larger piece of the big Pangaea puzzle.

4. A healthy ecosystem is one in which its plants and animals work in harmony. There are no drastic spikes in the populations of any one species, or drops in another. A large number of different species (a great biodiversity) is one **indicator** of an ecosystem's health.
5. I'd spent the night listening to travel stories and noticing, over pumpkin pie, the little **indications** that I was in another country. That's what that was, I said to myself. In French class, I'd learned that kissing on the cheek was a common European way of greeting people. I had just experienced culture first hand.

ReadWorks.org · © 2020 ReadWorks®, Inc. All rights reserved.  
Definitions and sample sentences within definitions are provided by Wordsmyth. © 2015 Wordsmyth. All rights reserved.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

1. What are tectonic plates?

- A. enormous earthquakes that uprooted trees and triggered landslides in the Midwest from 1811 to 1812
- B. enormous pieces of Earth's crust and upper mantle that fit together like pieces in a jigsaw puzzle
- C. enormous shock waves caused by large cracks on the Earth moving together and snapping apart
- D. enormous sensors with which Freed and his colleagues would track any tiny movements of the Earth's crust

2. The formation of faults in Earth's crust is an effect. What causes faults to form in the crust?

- A. Global Positioning System sensors
- B. beds shaking across New York City
- C. the movement of tectonic plates
- D. landslides across the Midwest

3. The New Madrid earthquakes did not happen in a place that is earthquake-prone, or likely to have earthquakes.

What evidence in the text supports this conclusion?

- A. The New Madrid faults lie far from any plate boundary.
- B. Faults are cracks in Earth's crust.
- C. The ground on either side of a fault moves very gradually.
- D. Tectonic plates fit together like pieces in a jigsaw puzzle.

4. Read these sentences from the text.

"Freed and his colleagues studied the New Madrid faults for 10 years.

"They expected to see the ground slowly twisting and turning, causing stress to build up in the rocks."

Why did Freed and his colleagues expect to see the ground slowly twisting and turning?

- A. because tectonic plates fit together like pieces in a jigsaw puzzle
- B. because most earthquakes happen at the boundaries of tectonic plates
- C. because California lies atop a boundary where the Pacific Plate meets the North American Plate
- D. because the movement of the ground on either side of a fault is usually what causes stress to build up in rocks

5. What is the main idea of this passage?

- A. Tectonic plates can cause large faults to appear in the crust near plate boundaries.
- B. California lies atop a boundary where the Pacific Plate meets the North American Plate.
- C. The movement of the Mississippi River has caused a lot of damage in the Midwest.
- D. The New Madrid earthquakes might have been caused by the release of pressure from the ground above the Reelfoot Rift.

6. To organize this text, the author divides it into sections with subheadings. Why might have the author given the subheading "High-Risk Zones" to the final section?

- A. to argue that Freed's theory does not have solid proof and is at risk of being proven false
- B. to compare and contrast the earthquakes in the New Madrid area with the earthquakes in California
- C. to introduce the idea that if Freed's theory is confirmed, other areas could be at risk of earthquakes
- D. to show that places without a recent history of earthquakes aren't at risk for more earthquakes in the future

**7.** Choose the answer that best completes the sentence.

Rifts under river valleys haven't experienced earthquakes in recent history.

\_\_\_\_\_, those faults may be lying quietly, getting ready to rock.

- A. However
- B. Instead
- C. Namely
- D. Primarily

**8.** Read these sentences from the text.

"The weight of the ground above the rift had been pressing down on the New Madrid faults, holding back the stored-up stress for millions of years. As the river washed away the ground, a huge weight was lifted from Earth's crust."

What do Freed and his colleagues think happened as that pressure eased?

**9.** According to Freed's theory, why might the New Madrid area be at risk for more earthquakes?

Support your answer with evidence from the text.

**10.** If Freed's theory is confirmed, how might it be helpful outside of the New Madrid area?

Support your answer with evidence from the text.



## Wetlands and Habitat Loss

by Elaine Mao



What image comes to mind when you think of a swamp? How about a marsh or a bog? Chances are you had a similar image in your mind for all of these. That's because these are, in fact, very similar environments. In everyday use, it is common to use these terms interchangeably, and while there are minute differences among the three land areas, they all belong to the same general category: wetlands.

A wetland is an area of land that is filled or covered with water for at least part of the year. Wetlands are neither completely dry nor completely underwater. They are known as "transition zones" because they are the link between water and land, and they have a unique combination of the characteristics of both. The special characteristics of these "transition zones" enable them to support plant and animal life not found anywhere else. A common nickname for wetlands is "nurseries of life."

Chances are, however, when you envisioned a swamp (or a marsh or a bog), you conjured up an image of a rather unpleasant place: creepy and shadowy, muddy, overrun with snakes and insects. Would it ever occur to you that this could be the kind of place we would want to save and preserve? Probably not.

Wetlands have historically been regarded as wastelands and centers of disease and insect infestation, and humans have sought to avoid or eliminate them when possible. Since the 18th century, more than half of the original wetlands in the United States have been degraded or destroyed. In the 19th century, there was a massive push to drain the wetlands, which harbored malaria-bearing mosquitoes, after a series of yellow fever epidemics. Since then, further destruction has occurred as a result of human activities, such as agriculture, industrialization and development. Wetlands have been drained and converted to farmland, filled in to provide more opportunities for

residential and industrial development, or used as dumping grounds for waste. Other human activities, such as pollution, while not directly targeted at eliminating wetlands, have also played a role in the process.

However, in recent decades, attitudes about wetlands have changed. People have begun to realize that wetlands are valuable and productive ecosystems that fulfill an essential function for both humans and wildlife. Due to their unique characteristics, wetlands can support a wide diversity of plants, mammals, reptiles, birds and fish. They also control floodwaters and protect us from storms and hurricanes. Wetlands also improve water quality by filtering, cleaning and storing water. Lastly, many people rely on wetlands for their livelihood, as they are important centers for hunting, fishing and recreation.

The state of Louisiana, in the United States, relies heavily on wetlands, and is one of the regions of the country that has been most adversely affected by wetlands destruction. Southern Louisiana has some of the most extensive wetlands in the United States, containing approximately 40 percent of the country's total wetlands area. This is because Louisiana is located at the drainage gateway where the Mississippi River meets the Gulf of Mexico. Much of the region's economy and culture is built around the wetlands. However, Louisiana's wetlands are quickly disappearing. Although the state has only 40 percent of the country's wetlands, it also bears 80 percent of the country's wetland losses. Every 38 minutes, the equivalent of a football field is lost. This has serious implications for the region's wildlife and economy, as well as the ability of the region to withstand natural disasters.

The Louisiana wetlands are home to a variety of animals, including alligators, snakes, turtles, coyotes, muskrats, armadillos, pelicans and egrets, among others. The wetlands are a crucial resource for many endangered species. In fact, more than one-third of the United States' threatened and endangered species live only in wetlands, and more than one-half use the wetlands at some point in their lives for breeding, nesting or raising their young. Many species of migratory birds depend on the wetlands and would go extinct if the wetlands were destroyed.

The wetlands are also essential to the state's fishing industry, providing a habitat for fish, shrimp, oysters and crabs. As of 2013, Louisiana's commercial fishing industry is responsible for 25 percent of all seafood produced in the United States, with the highest production of shrimp, oysters and freshwater fish in the nation. Approximately one in every 70 jobs in the state is related to the fishing industry. The destruction of the wetlands would have disastrous consequences for the economy of the area and the livelihoods of many of Louisiana's residents.

In addition to endangering the wildlife and economic prosperity of an area, the loss of wetlands also puts humans at risk. Wetlands serve as a natural buffer zone against storms and hurricanes, slowing down the storms and reducing their force before they move inland. However, as the wetlands disappear, some cities are becoming more exposed.

The city of New Orleans, Louisiana, has already suffered the consequences of this gradual depletion of wetland buffer zones. In 2005, Hurricane Katrina, one of the deadliest and most destructive hurricanes in the entire history of the United States, hit the Gulf Coast. There were more than 1,800 casualties, with the greatest number of them concentrated in New Orleans. Eighty percent of the city was flooded, and there were more than 700 dead. Many blamed the destruction of New Orleans on the failure of the levees, which are manmade barriers that prevent water from flooding into a city. However, scientists and researchers believe that the hurricane would have done far less damage to the city if the surrounding wetlands had been intact. Since the storm, there has been a greater national focus on preserving and restoring the wetlands on the Gulf Coast. Preserving our wetlands and maintaining a buffer zone against storms will only become more crucial in the future, as climate change may increase both the frequency and the severity of extreme weather events such as

hurricanes.

In recent decades, since the importance of wetlands became apparent, there has been a push toward better education and regulation. The U.S. Environmental Protection Agency (E.P.A.) has declared the month of May to be American Wetlands Month, which is dedicated to celebrating the ways in which wetlands enrich our lives and the environment.

Regulation has also been an important tool in the fight against wetlands loss. Since 1998, the United States has maintained a "no net loss" wetlands policy. This means that the total area of wetlands in the country must either remain constant or increase. If wetlands are destroyed for agriculture, development, or any other reason, the effect must be balanced out by restoring or reclaiming wetlands elsewhere. The policy has had a dramatic effect in slowing the rate of wetlands loss.

## buffer

buff · er

### Advanced Definition

#### noun

1. a device, such as a bumper, that absorbs the force of a collision.
2. something that prevents or moderates the interaction of two people, things, groups, countries, or the like.
3. in chemistry, a substance that preserves the relative acidity or alkalinity of a solution when an acid or base is added.
4. in computer terminology, a portion of the hardware used to hold information temporarily.

#### transitive verb

1. to add a buffer to (a chemical solution).
2. to diminish the undesirable effects of.

---

### These are some examples of how the word or forms of the word are used:

1. "It's a floor **buffer**. It polishes the floors."
2. Wetlands serve as a natural **buffer** zone against storms and hurricanes, slowing down the storms and reducing their force before they move inland. However, as the wetlands disappear, some cities are becoming more exposed.

# preserve                      pre       ·       serve

**Definition****verb**

1. to keep safe from loss or harm.

*The court will preserve the right to freedom of speech.*

**noun**

1. an area of land or water where plants and animals are protected.

*Hunting is not allowed in animal preserves.*

**Advanced Definition****transitive verb**

1. to protect from injury, harm, or mishap.

*She prayed that the children would be preserved from harm.*

*Using this polish will help preserve the wood.*

2. to keep safe from loss.

*We don't know how many endangered species can be preserved.*

*Will the court preserve my right to dissent?*

3. to maintain in a relatively unchanged condition, esp. historic buildings or wildlife environments.

*They're doing what they can to preserve the animal's habitat.*

4. to prepare (food) so that it can be kept for a long period of time.

*They often preserved meat by preparing it with salt and smoking it.*

**intransitive verb**

1. to treat fruit or vegetables so as to retard spoilage.

**noun**

1. (usu. pl.) fruit or vegetables that are preserved in sugar.

*She opened a jar of strawberry preserves and spread some on her bread.*

2. an area set aside for the protection and propagation of fish, animals, or plant life.

*They established a wildlife preserve in the wetlands.*

**Spanish cognate**

*preservar*: The Spanish word *preservar* means preserve.

**These are some examples of how the word or forms of the word are used:**

1. Canopic jars are special containers used to hold the **preserved** organs of the dead.
2. The group has asked the federal government to name Route 15 as a National Scenic Byway. That designation would help protect the area. Preservationists will ask Congress for money to **preserve** historic areas.
3. As the consequences of modern industrial agriculture have become apparent, farmers have been encouraged to take steps to reduce erosion. It is now considered good practice to minimize plowing of the land to **preserve** the integrity of the soil.
4. By covering grass with cement, we may force the animals that live there to move into another area. It is important to understand that we have to work to **preserve** the habitat of the native plants and animals in order to keep the ecosystem healthy.



**transition**                      tran · si · tion**Advanced Definition****noun**

1. change from one position, stage, or situation to another.

*There were painful experiences during his transition from boyhood to manhood.*

**Spanish cognate**

*transición*: The Spanish word *transición* means transition.

**These are some examples of how the word or forms of the word are used:**

1. I left the coffee shop and walked straight to my bench in the park, only peripherally aware of the few minutes it took to get there. The **transition** from traffic noises to park noises was as familiar, and taken for granted, as the transition from inhale to exhale.
2. Another challenge of working in food is the change in what ingredients are available. "Working with seasonal ingredients has been especially challenging," said Monika, "Especially during our first **transition** from summer to winter." At a Fare Trade NYC meeting, Monika helped explain to a young woman starting a soup business the difficulty of working with seasonal ingredients and worked with her to create a plan for finding the right ingredients for her soups.
3. John Tyler's **transition** into the presidency wasn't easy. Tyler was a Southern Democrat during most of his early political career. While running for office with Harrison, he left the Democrats. He became part of the Whig party instead. But when he became president, he disagreed with the Whigs on many issues.
4. One of the first books printed in Italy was a beautiful long poem, Divine Comedy. An Italian writer named Dante Alighieri penned it. The poem's main theme is life after death. Dante himself is the main character. The book is a perfect example of the **transition** from the Middle Ages to the Renaissance.

**Name:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**1. What is a wetland?**

- A. a business that makes its money from hunting or fishing
- B. a city on a coast where floods occur, often resulting in the loss of human life
- C. a "no net loss" policy requiring the amount of something to remain constant or increase
- D. an area of land that is filled or covered with water for at least part of the year

**2. destruction of wetlands is an effect. What is one of its causes?**

- A. Regulation has been an important tool in protecting wetlands.
- B. Wetlands have been drained and converted to farmland.
- C. Many species of migratory birds depend on the wetlands.
- D. Louisiana has some of the most extensive wetlands in the United States.

**3. Wetlands serve important purposes for humans.**

What information from the passage supports this statement?

- A. Wetlands have historically been regarded as centers of disease and insect infestation.
- B. Wetlands can protect people from storms and help them earn a living through fishing.
- C. Louisiana is located at the drainage gateway where the Mississippi River meets the Gulf of Mexico.
- D. Hurricane Katrina caused more than 1,800 casualties, including over 700 in New Orleans.

**4. How have attitudes about wetlands changed in recent decades?**

- A. People have become less willing to regulate the destruction of wetlands than they used to be.
- B. People have become more concerned about the threat of disease from wetlands than they used to be.
- C. People have become more interested in protecting wetlands than they used to be.
- D. People have become less interested in protecting wetlands than they used to be.

5. What is this passage mainly about?

- A. Louisiana
- B. Hurricane Katrina
- C. malaria
- D. wetlands

6. Read the following sentence: "Chances are, however, when you envisioned a **swamp** (or a marsh or a bog), you conjured up an image of a rather unpleasant place: creepy and shadowy, muddy, overrun with snakes and insects."

What does the word **swamp** mean in the sentence above?

- A. a piece of land that is partly covered by water
- B. a state that is on the Gulf of Mexico
- C. a job related to the hunting or fishing industry
- D. an animal species that is in danger of dying out

7. Choose the answer that best completes the sentence below.

For years people wanted to avoid or destroy wetlands; \_\_\_\_\_, many people want to save wetlands.

- A. previously
- B. currently
- C. in closing
- D. as an illustration

8. What is happening to Louisiana's wetlands?

9. If Louisiana's wetlands were destroyed, what would happen? Support your answer with evidence from the passage.

10. Should wetlands be protected? Explain why or why not, using evidence from the passage.

## Designing the First Flying Machine

by ReadWorks



*Inventor Wilbur Wright's 1904 notes on flight*

Orville and Wilbur Wright, two brothers who lived at the turn of the 20th century, are often credited with being the inventors of the airplane. But in fact, they were not the first humans to launch an object into flight. Many had flown (and crashed) experimental aircraft before. They weren't even inventors to begin with. Instead, they started their careers as newspaper printers and bicycle-makers, then applied the design concepts and scientific principles they learned along the way to their ultimate innovation: a system of controls to fly the plane and keep it from crashing. It is this invention that gained them notice as inventors, and the admiration of the world.

The Wright brothers were born in the Midwest. Wilbur was born in Indiana in 1867, and Orville followed four years later, in 1871, after the Wright family moved to Ohio. The two often played together as boys, and their favorite toy was a helicopter, brought home by their father from his travels in 1878. Adapted from a design created a few years earlier by French inventor Alphonse Pénard, the toy had blades that twirled with the help of a rubber band. When it inevitably broke, the boys built a replacement by themselves.

Though the boys never stopped tinkering, neither of them graduated from high school. Orville dropped out in 1889, his junior year of high school, to start a printing business. Together, the two published a newspaper, and they worked for commercial clients (including the famous African-American poet and writer Paul Dunbar, who had been their classmate in school). A few years later, when bicycles became all the rage in America, they added a repair and sales shop to their projects. By 1896, they had created and begun manufacturing their very own brand.

If the brothers had kept on building bikes and printing poetry, they might have done very well for themselves, and we might have forgotten them by now. But instead, they used the proceeds from their business ventures to fund further tinkering in a new kind of interest: flying.

By this time, many people had been trying to invent an airplane that worked. Some airplanes were steam-powered; others had flapping wings, like birds. The German inventor Otto Lillenthal, also known as "The Glider King," was appearing in all the papers, showing off his gliding machine, which he'd built based on his studies of storks. Though his gliders had no motors, instead coasting purely on air, they could keep a pilot hanging in the air under the right conditions. When Lillenthal made headlines again by plunging to his death in August of 1896 during a gliding accident, inventors knew they had to improve upon his designs, or else.

There was no Internet to research designs back in 1896, so the brothers had to write letters to the Smithsonian Institution (today the world's largest museum and research complex) to request more information about early flight pioneers. They pored over everything they could find, from Lillenthal's designs to the diagrams of Leonardo da Vinci, who had sketched designs for both gliders and helicopters as early as the 1400s. And like many inventors before them, they watched a lot of birds.

One big difference between birds and early gliders, the brothers noticed, was that birds were able to "roll" right or left as the winds changed, and turned by shifting the angles of their wings. Much like a person riding a bicycle, they thought birds could "bank" or lean into turns, while still remaining stable and upright. By contrast, a glider pilot did not have the same level of control as a bird, leading him or her to topple over or crash, as Lillenthal did.

The Wright brothers loved experimenting with flight, but they certainly didn't want to die trying, so from the beginning, they focused on bringing more control to the flying experience. The brothers drew from their research of flying machines and utilized the design principles from the bicycle world. Once they figured out how to control the movement of a machine as well as their bird friends could control their bodies, the brothers thought they could easily find the right parts to add onto wings and motors to create a viable flying machine. This approach was very different from the approaches of other would-be airplane inventors of the day. Other engineers were studying trains or ships, and thus, spent most of their time building stronger engines (as it was thought that a strong engine could propel a plane into the air more easily) or ship-like rudders to guide the airplanes along. As it turned out, the Wright brothers had the winning approach.

Once the brothers had decided to begin testing their experiments with gliders, they needed to find a better place to glide as Ohio wasn't quite windy enough. After writing to the U.S. Weather Bureau, analyzing the weather data for various areas and asking other inventors for advice, the Wright brothers decided that Kitty Hawk in North Carolina would be the best place to take advantage of sea breezes for gliding practice. From 1900 to 1903, they set up camp at Kitty Hawk, testing designs by making "glider kites" that could be flown without pilots for safety.

Still comparing human innovations with birds in flight, the brothers changed each small part of their design. Some had giant wings; some came without tails. Many were still crashing, but the brothers tried not to become frustrated. During one winter, they returned home to Ohio, where they tried

different ways of testing that weren't so expensive. On some days, they could be seen pedaling bicycles equipped with wings down the streets and startling passersby. On others, they'd create tiny airplane prototypes to test in the Ohio wind.

Over time, the brothers discovered many errors in the designs of the inventors that had come before them, including Lilienthal, and fixed them by using their own calculations. The biggest difference between riding a bicycle and flying a plane, they realized, was that machines on the ground only had to move forward or backward in order to get going. An airplane had to be controlled in three dimensions: it could point up or down, curve from side to side, and roll upside-down. So they knew their final design had to have elements that controlled movement in each of these three ways to keep them from crashing. The resulting design was called "three-axis control," and it is still used today.

The Wright brothers designed three-axis control to help the pilot guide the plane in all three dimensions. They created one innovation called "wing-warping" which allows the pilot to bend (or "warp") the wings and help to turn the plane like a bird might do with its wings. They created another innovation called the "forward elevator" which helps the pilot to turn the plane upwards, toward the sky, or downward, toward the ground. And finally, they figured out a way to use that ship rudder after all: it could be used during turns to keep the plane from flipping over, as it had done in earlier gliding experiments.

By 1902, the Wright brothers were piloting hundreds of well-controlled glider flights (between September and October of 1902, they made between 700 and 1,000 glides). They finally felt confident enough to patent their "three-axis control" system. And they were ready to add engines to the equation. After searching around for the right motor for weeks, the brothers asked their bike-shop buddy, Charlie Taylor, to try his hand at creating a motor for an airplane. In six weeks, he had it ready. Just one year after they created their three-axis system, the brothers made their first motorized flight, and by doing so, made history.

## glide

## glide

### Advanced Definition

#### intransitive verb

1. to move in a smooth and seemingly effortless manner.

*The bird glided through the air.*

2. to move silently and stealthily.

*She glided along the shadowy passageway.*

3. to pass smoothly or easily, without attracting attention.

*The summer days glided by.*

4. of airplanes, to descend gradually, with engine power diminished.

5. to fly in a glider.

#### transitive verb

1. to cause to glide.

*He glided the plane to a landing.*

#### noun

1. a gliding motion or movement, as in some dances.
2. the act or an instance of gliding.
3. in music, a passing without pause or break from one note to another.

### These are some examples of how the word or forms of the word are used:

1. When they drop to the ground to find food, they free-fall from as high as 100 feet. "The soles of their feet are rubbery, which is good for gripping branches, and they **glide** down from the canopy, which helps them land without injuring themselves," says Dabek.
2. One time in particular, a dolphin and I were swimming, and he stopped next to me and came so close, he put his dorsal fin under my arm and **glided** with me down about 40 feet.
3. Rainforests are also home to some animals you might want to avoid, like flying snakes (although their name is actually a misnomer since they can only **glide** and not gain altitude) and spiders that eat birds.
4. Penguins have evolved, so they can spend time both in water and on land-although they are much more graceful in the water than they are on land! (Look at how they waddle awkwardly on land and how they **glide** smoothly through the water.) While penguins cannot fly, they do have small wings called flippers that help them swim underwater.

# innovation in · no · va · tion

## Advanced Definition

### noun

1. a new method, approach, idea, or the like.
2. the act of proposing or implementing such a new method or the like.

## Spanish cognate

*innovación*: The Spanish word *innovación* means innovation.

---

### These are some examples of how the word or forms of the word are used:

1. The world was slow to accept Louis Braille's **innovation**. Indeed, during his lifetime, his method was not widely accepted.
2. Of course cost is often a factor when looking to build any structure. On a budget, designers may have to put aside their grand plans for elaborate design or **innovation** and stick to the basics.
3. Eisenhower created a branch within the Department of Defense to ensure that the scientific leadership of America wouldn't be eclipsed again in the future. This new organization, the Advanced Research Projects Agency (ARPA), became one of the major engines of technological **innovation** throughout the 1960s and 1970s.

# viable vi · a · ble

## Advanced Definition

### adjective

1. capable of germinating, growing, or developing, as a living organism or social organization.

*Many of the seeds were not viable, and we didn't get as many plants as we had hoped.*

2. capable of sustaining life and developing as a fetus outside the womb.
3. capable of being put into effect; practicable.

*We rejected a number of ideas before we came up with a viable strategy.*

## Spanish cognate

*viable*: The Spanish word *viable* means viable.

---

### These are some examples of how the word or forms of the word are used:

1. Other inventors were studying trains or ships, not birds and bicycles, to design **viable** flying machines. Thus, they spent most of their time building stronger engines to fly a plane more easily and ship-like steering parts to guide the airplanes along.
2. With peace secured, the colonists in Plymouth were able to concentrate on building a **viable** settlement for themselves rather than spend their time and resources guarding themselves against attack. Squanto taught them how to plant corn, which became an important crop, as well as where to fish and hunt beaver.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

1. Who is credited as the inventor(s) of the airplane?

- A. Otto Lillienthal
- B. Orville and Wilbur Wright
- C. Alphonse Pénaud
- D. Charlie Taylor

2. What does the author describe in the passage?

- A. Orville and Wilbur Wright's childhood in Indiana
- B. how French inventor Alphonse Pénaud designed the helicopter
- C. how the first airplane was invented
- D. flight patterns of migratory birds

3. Otto Lillienthal's gliding airplane design was not a success. What evidence from the text supports this statement?

- A. "By this time, many people had been trying to invent an airplane that worked. Some airplanes were steam-powered; others had flapping wings, like birds."
- B. "The German inventor Otto Lillienthal, also known as "The Gilder King," was appearing in all the papers, showing off his gliding machine, which he'd built based on his studies of storks."
- C. "Though his gliders had no motors, instead coasting purely on air, they could keep a pilot hanging in the air under the right conditions."
- D. "When Lillienthal made headlines again by plunging to his death in August of 1896 during a gliding accident, inventors knew they had to improve upon his designs, or else."

4. Which of the following helped Orville and Wilbur to finally create a successful plane?

- A. directly working with the German inventor Otto Lillienthal
- B. their experience building experimental aircraft during their childhood
- C. the research and designs of other inventors which Orville and Wilbur improved upon
- D. the formal education in Physics that Orville and Wilbur had both received

5. What is this passage mostly about?

- A. the creation of the first motorized airplane
- B. the Wright Brothers' bicycle business
- C. Otto Lillienthal's gliders
- D. the first transcontinental flight

6. Read the following sentences: "If the brothers had kept on building bikes and printing poetry, they might have done very well for themselves, and we might have forgotten them by now. But instead, they used the proceeds from their business **ventures** to fund further tinkering in a new kind of interest: flying."

As used in the passage, what does "**ventures**" most nearly mean?

- A. distractions
- B. inventions
- C. designs
- D. projects

7. Choose the answer that best completes the sentence below.

\_\_\_\_\_ many of Orville and Wilbur's first airplane models crashed, they persevered and were eventually successful.

- A. Even though
- B. As a result
- C. Initially
- D. Above all

8. What difference did the Wright Brothers notice between birds and early gliders?

9. Describe the gliding machine Otto Lillienthal had invented.

10. How was Orville and Wilbur's approach to building a successful airplane different from that of other inventors who were working on airplanes? Use information from the text to support your answer.