



Compton USD Learning Packet #2

Seventh Grade

Name _____

7th Grade Learning Packet

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Week 3

Day	Lesson	Date Completed
1	<ol style="list-style-type: none">1) CATQ-Remarks at the Dedication of the Aerospace Medical Health Center. Read the selection. Answer questions 1-6. Remember to use key details from the text to support your answer.2) Language Spiral #1 - Answer questions 1-4.3) My SBAC Coach - Read the assignment. Read and annotate text about NASA researcher Katherine Johnson.	
	<p>Day 1 Go Math 8.1</p> <ol style="list-style-type: none">1) Read through <i>Getting Ready For Modeling Geometric Figures</i>2) <i>Reading Start-Up</i>3) Explore Activity 14) Example 15) Explore Activity 26) Guided Practice - Answer questions 1-5 all	
2	<ol style="list-style-type: none">1) CATQ - Remarks at the Dedication of the Aerospace Medical Health Center. Reread the selection. Answer questions 7-11. Remember to use key details from the text to support your answer.2) Language Spiral #1 - Answer questions 5-83) My SBAC Coach - Reread text Katherine Johnson. Review Stem Starters. Begin drafting your answer to the writing prompt	
	<p>Day 2 Go Math 8.1</p> <ol style="list-style-type: none">1) Independent Practice - Answers questions 6 -10 all	
3	<ol style="list-style-type: none">1) CATQ - Reread the text. Complete assignment Analyze Text-Remarks at the Dedication of the Aerospace Medical Health Center. Remember to use context clues to understand the meaning of unfamiliar words.2) Language Spiral #1 - Answer questions 9-113) My SBAC Coach - Read the assignment. Reread the text Katherine Johnson. Continue answering the writing prompt.	
	<ol style="list-style-type: none">1) Next Gen Math Geometry G.1 Answer questions 1-8 all	
4	<ol style="list-style-type: none">1) Spiral #1 - A Job to Sink Your Teeth Into #1. Read the selection. Answer questions 1-8 Remember to use key details from the text to support your answer.2) Language Spiral #1 - Answer questions 12-143) My SBAC Coach - Read the assignment. Edit and revise the	

	writing prompt.	
	<p>Day 1 Go Math 9.1</p> <ol style="list-style-type: none"> 1) Read through Getting Ready For <i>Circumference, Area, and Volume</i> 2) Explore Activity 1 3) Example 1 4) Explore Activity 2 5) Guided Practice - Answer questions 1-10 all 6) Independent Practice - Answer questions 11 - 21 all 	
5	<ol style="list-style-type: none"> 1) Spiral #1 - Can You Take the Heat #2. Read the selection. Answer questions 1-8 Remember to use key details from the text to support your answer. 2) Language Spiral #1 - Answer questions 15-18 3) My SBAC Coach - Rewrite and publish your story. 	
	<ol style="list-style-type: none"> 1) Next Gen Math Geometry G.1 Answer questions 1-7 all 	

Recommended Online Usage	
<input type="checkbox"/> I-Ready Reading - 45 minutes per week	<input type="checkbox"/> I-Ready Math - 45 minutes per week
<input type="checkbox"/> Imagine Learning for English Learners - 90 minutes per week	<input type="checkbox"/> Dreambox - 90 minutes per week

Anchor Text 1: Remarks at the Dedication of the Aerospace Medical Health Center
LEXILE: 1380L

Background *In 1957, the country then known as the Soviet Union launched the first satellite to orbit Earth. The Soviet Union and the United States were bitter enemies at the time. After becoming the 35th president of the United States in 1961, John F. Kennedy was determined to equal the Soviet's knowledge of space. Well known for many accomplishments as president, Kennedy is also remembered as an inspirational speaker. He gave this speech the day before his assassination in November 1964*



SETTING A PURPOSE As you read, pay attention to the points President Kennedy is making. Why does he think the United States should be involved with space research?

Collection 4: Risk and Exploration

1. Claim 1, Target 9: Central Ideas, Standard: RI.7.2

Which sentence **best** summarizes a central idea of the text?

- A Kennedy's speech is about the value of the space program.
- B Kennedy wants to know from his audience what can you do for your country.
- C Kennedy's speech is a dedication to the Aerospace Medical Health Center.
- D Kennedy's remarks are about astronauts.

2. Claim 1, Target 8: Key Details, Standard: RI.7.1

Which sentence from the text **best** supports the idea that Kennedy was impressed with the state of Texas?

- A "It was here that Charles Lindbergh and Claire Chennault, and a host of others, who, in World War I and World War II possand Korea, and even today have helped demonstrate American mastery of the skies, trained at Kelly Field and Randolph Field, which form a major part of aviation history."
- B "For this city has long been the home of the pioneers."
- C "It is fitting that San Antonio should be the site of this center and this school as we gather to dedicate this complex of buildings."
- D "I have come to Texas today to salute an outstanding group of pioneers, the men who man the Brooks Air Force Base School of Aerospace Medicine and the Aerospace Medical Center."

Mr. Secretary, Governor, Mr. Vice President, Senator, Members of the Congress, members of the military, ladies and gentlemen:

For more than 3 years I have spoken about the New Frontier. This is not a partisan term, and it is not the exclusive property of Republicans or Democrats. It refers, instead, to this Nation's place in history, to the fact that we do stand on the edge of a great new era, filled with both crisis and opportunity, an era to be characterized by achievement and by challenge. It is an era which calls for action and for the best efforts of all those who would test the unknown and the uncertain in every phase of human endeavor. It is a time for pathfinders and pioneers.

I have come to Texas today to salute an outstanding group of pioneers, the men who man the Brooks Air Force Base School of Aerospace Medicine and the Aerospace Medical Center. It is fitting that San Antonio should be the site of this center and this school as we gather to dedicate this complex of buildings. For this city has long been the home of the pioneers in the air. It was here that Sidney Brooks, whose memory we honor today, was born and raised. It was here that Charles Lindbergh and Claire Chennault, and a host of others, who, in World War I and World War II and Korea, and even today have helped demonstrate American mastery of the skies, trained at Kelly Field and Randolph Field, which form a major part of aviation history. And in the new frontier of outer space, while headlines may be made by others in other places, history is being made every day by the men and women of the

3. Claim 1, Target 11: Reasoning and Evidence, **Standard:** RL.7.1

This question has two parts. First answer Part A. Then answer Part B.

Part A

Which of the inferences about Kennedy's speech is supported by the text?

- (A) Kennedy's speech is a farewell to all the pathfinders and pioneers.
- (B) Kennedy's speech is a tribute to the people who demonstrated mastery of the skies.
- (C) Kennedy's speech is a dedication to Charles Lindbergh and Claire Chennault.
- (D) Kennedy's speech is a demand that astronauts get proper recognition.

Part B

What sentence from the text **best** supports your answer in Part A?

- (A) "And in the new frontier of outer space, while headlines may be made by others in other places, history is being made every day by the men and women of the Aerospace Medical Center, without whom there could be no history."
- (B) "The space program stands on its own as a contribution to national strength."
- (C) "It was here that Charles Lindbergh and Claire Chennault, and a host of others, wo, in World I and World II.
- (D) "I have come to Texas today to salute an outstanding group of pioneers, the men who man the Brooks Air Force School of Aerospace Medicine and the Aerospace Medical Space."

Aerospace Medical Center, without whom there could be no history.

Many Americans make the mistake of assuming that space research has no values here on earth. Nothing could be further from the truth. Just as the wartime development of radar gave us the transistor, and all that it made possible, so research in space medicine holds the promise of substantial benefit for those of us who are earthbound. For our effort in space is not, as some have suggested, a competitor for the natural resources that we need to develop the earth. It is a working partner and a coproducer of these resources. And nothing makes this clearer than the fact that medicine in space is going to make our lives healthier and happier here on earth.

I give you three examples: first, medical space research may open up new understanding of man's relation to his environment. Examinations of the astronaut's physical, and mental, and emotional reactions can teach us more about the differences between normal and abnormal, about the causes and effects of disorientation, about changes in metabolism which could result in extending the life span. When you study the effects on our astronauts of exhaust gases which can contaminate their environment, and you seek ways to alter these gases so as to reduce their toxicity, you are working on problems similar to those we face in our great urban centers which themselves are being corrupted by gases and which must be clear.

And second, medical space research may revolutionize the technology and the techniques of modern medicine. Whatever new devices are created, for example, to monitor our astronauts, to

4. Claim 1, Target 10 Word Meaning, **Standard:** RI.7.4

Read the line from the text.

"Here at this center we have the laboratories, the talent, the resources to give new impetus to vital research in the life centers."

What is the meaning of the word impetus?

- (A) encouragement
- (B) excitement
- (C) environment
- (D) ecosystem

5. Claim 1, Target 12: Analysis within/across Texts, **Standard:** RL.7.1

How does Kennedy's speech develop over the course of the text?

- (A) His speech challenges the citizens of San Antonio to build an Aerospace Center.
- (B) His speech recognizes the importance of medical space research.
- (C) His speech gives information about the contributions and support from all Americans in regards to the conquest of space.
- (D) His speech argues that the study of medicine in space will make everyone's lives healthier and happier.

<p>measure their heart activity, their breathing, their brain waves, their eye motion, at great distances and under difficult conditions, will also represent a major advance in general medical instrumentation. Heart patients may even be able to wear a light monitor which will sound a warning if their activity exceeds certain limits. An instrument recently developed to record automatically the impact of acceleration upon an astronaut's eyes will also be of help to small children who are suffering miserably from eye defects, but are unable to describe their impairment. And also by the use of instruments similar to those used in Project Mercury, this Nation's private as well as public nursing services are being improved, enabling one nurse now to give more critically ill patients greater attention than they ever could in the past.</p> <p>And third, medical space research may lead to new safeguards against hazards common to many environments. Specifically, our astronauts will need fundamentally new devices to protect them from the ill effects of radiation which can have a profound influence upon medicine and man's relations to our present environment.</p> <p>Here at this center we have the laboratories, the talent, the resources to give new impetus to vital research in the life centers. I am not suggesting that the entire space program is justified alone by what is done in medicine. The space program stands on its own as a contribution to national strength. And last Saturday at Cape Canaveral I saw our new Saturn C-1 rocket booster, which, with its payload, when it rises in December of this year, will be, for the first time, the largest booster in the world, carrying into space the largest</p>	<p>6. Claim 1, Target 12 Text Structures and Features, Standard: RL.7.1</p> <p>What effect does using a specific claim have on the reader's understanding of Kennedy's argument?</p> <p>(A) Kennedy's use of a specific claim reminded the citizens about medical research.</p> <p>(B) Kennedy's use of a specific claim justified his feelings on the given topic.</p> <p>(C) Kennedy's use of a specific claim gave reasons and evidence to support his assertion.</p> <p>(D) Kennedy's use of a specific claim expressed his feelings about the new location of the Air Force Base.</p>
<p>And third, medical space research may lead to new safeguards against hazards common to many environments. Specifically, our astronauts will need fundamentally new devices to protect them from the ill effects of radiation which can have a profound influence upon medicine and man's relations to our present environment.</p> <p>Here at this center we have the laboratories, the talent, the resources to give new impetus to vital research in the life centers. I am not suggesting that the entire space program is justified alone by what is done in medicine. The space program stands on its own as a contribution to national strength. And last Saturday at Cape Canaveral I saw our new Saturn C-1 rocket booster, which, with its payload, when it rises in December of this year, will be, for the first time, the largest booster in the world, carrying into space the largest</p>	<p>7. Claim 1, Target 13: Language Usage, Standard: RL.7.1</p> <p>Read the sentence from the text.</p> <p>"... we will climb this wall with safety and with speed—and we shall then explore the wonders on the other side."</p> <p>How does the sentence, "... we will climb this wall with safety and with speed—and we shall then explore the wonders on the other side." affect the reader's interpretation of the meaning of the text?</p> <p>(A) It gives the reader strength to climb walls and mountains.</p> <p>(B) It demonstrates the power the author has on the reader.</p> <p>(C) It allows the reader to envision strength and unity.</p> <p>(D) It shows the reader that the author is strong and fierce.</p>

payload that any country in the world has ever sent into space.

I think the United States should be a leader. A country as rich and powerful as this which bears so many burdens and responsibilities, which has so many opportunities, should be second to none. And in December, while I do not regard our mastery of space as anywhere near complete, while I recognize that there are still areas where we are behind—at least in one area, the size of the booster—this year I hope the United States will be ahead. And I am for it. We have a long way to go. Many weeks and months and years of long, tedious work lie ahead. There will be setbacks and frustrations and disappointments. There will be, as there always are, pressures in this country to do less in this area as in so many others, and temptations to do something else that is perhaps easier. But this research here must go on. This space effort must go on. The conquest of space must and will go ahead. That much we know. That much we can say with confidence and conviction.

Frank O'Connor, the Irish writer, tells in one of his books how, as a boy, he and his friends would make their way across the countryside, and when they came to an orchard wall that seemed too high and too doubtful to try and too difficult to permit their voyage to continue, they took off their hats and tossed them over the wall—and then they had no choice but to follow them.

This Nation has tossed its cap over the wall of space, and we have no choice but to follow it. Whatever the difficulties, they will be overcome. Whatever the hazards, they must be guarded against. With the vital help of this Aerospace Medical Center, with the help of all those who labor

8. Claim 2, Target 9: Edit Clarify (conventions), Standard: L.7.2

Read the following sentence that includes **two** errors in punctuation. Then read the question that follows.

Many weeks months, years, of long tedious work lie ahead, there will be setbacks, frustrations, and disappointments.

Which sentence corrects all the grammar usage errors?.

- (A) Many weeks, months, and years of long tedious work lie ahead. There will be setbacks, frustrations and disappointments.
- (B) Many weeks months and years of long tedious work lie ahead, and there will be setbacks frustrations, and disappointments.
- (C) Many weeks, months, and years, of long tedious work. Lie ahead. There will be setbacks frustration and disappointments.
- (D) Many weeks, months, and years of long tedious work lie ahead. And there will be setbacks and frustrations, and disappointments.

9. Claim 2, Target 9: Edit Clarify (conventions), Standard: L.7.2

Read the following sentences and the directions that follow.

Whatever the hazzards, they must be guarded against.

Choose the sentence that does not have any errors in spelling.

- (A) Whatver the hazards, they must be guarded against.
- (B) Whatever the hazards, they must be guarded against.
- (C) Whatevver the hazzards, they must be guarded agianst.
- (D) Whatever the hazards, they must be guarded agianst.

1. Read the sentence.

Even though it started raining, Jessalyn planted the small tree beside the creek.

Which of these is a prepositional phrase in the sentence?

- A. Even though it started raining
- B. Jessalyn planted
- C. the small tree
- D. beside the creek

L.7.1.A

2. Which of these is an example of a complex sentence, not a simple sentence?

- A. Lee had a pocket watch that his grandfather had given him.
- B. The pocket watch was made in Switzerland a long time ago.
- C. The pocket watch told the time to the nearest minute and second.
- D. All his friends admired the beautiful pocket watch with its silver case.

L.7.1.B

3. Read the sentence.

Running fast, Randy's friend's house is just two minutes away.

Which sentence is the BEST revision?

- A. When he runs fast, Randy gets to his friend's house in just two minutes.
- B. Randy running fast gets to his friend's house two minutes away.
- C. Randy's friend's house, running fast, is just two minutes away.
- D. Randy's friend's house is just two minutes away, running fast.

L.7.1.C

4. Read the sentence.

The dense lush forest spread from the edge of the lake to the sharp mountain peaks.

Where should a comma be placed to make this sentence correct?

- A. after the adjective sharp
- B. after the adjective dense
- C. after the verb spread
- D. after the noun lake

L.7.2.A



Assignment

Making an Inference from Informational Text

Topic: Katherine Johnson

Making an Inference from Informational Text

Your Assignment:

Read the essay below. .

Katherine Johnson

By Maya Noble

Katherine Johnson is not a familiar household name. Her amazing accomplishments were not widely known about until the release of the recent movie "Hidden Figures". The movie is based on the true story of the women at NASA (National Aeronautics and Space Administration) who helped the United States effectively enter the "Space Race" against the Soviet Union in the mid-20th century.

Katherine was born on August 26, 1918 in West Virginia. She was a brilliant young African American girl who was born during a time when most young African American children did not attend school past 8th grade- if they were able to attend at all. Her parents recognized her incredible intelligence, and they made it possible for Katherine to attend high school and go on to college. Katherine was so smart that she started high school when she was 10 years old! She actually graduated from college when most people her

age were graduating from high school. She has an amazing gift with numbers. She has said that she just liked to count things!

Katherine studied to be a research mathematician which was not an easy thing to be since she was a woman- and even more specifically an African American woman. Segregation was widely accepted, and women of color did not have anywhere near the same opportunities as white men did at that time. That did not seem to matter too much to Katherine. She did whatever it took to have the career she wanted.

In 1953 Katherine started working for NASA. She was hired as a computer- literally “a person who computes” as her title stated. She was part of a team that hand-calculated data before computers were available. Eventually she was promoted and became a part of the team that worked to send John Glenn on a mission to orbit Earth. He had seen her work and wanted her to personally recalculate the numbers before he agreed to launch.

She had overcome many obstacles to get to that moment including having to run a half mile each way any time she needed to use a restroom because she was not allowed to use the “White Women Only” restroom in her office building. Katherine did not let anything stop her. She was (and likely still is) a math genius, and that is what she focused on instead of focusing on the challenges and barriers.

It was a great day for Katherine, and NASA, when John Glenn successfully orbited Earth and returned safely. It officially put the United States in the race to space. She went on to work on the Apollo missions and the Space Shuttle missions. She retired from NASA in 1986, but her work will continue to be relevant for generations to come because she even did some of the math research for the journey to Mars which NASA hopes will happen within the next 20 years.

In 2015 President Obama awarded Katherine with the Presidential Medal of Freedom. It is the highest civilian honor that an American can receive. Katherine passed away in early 2020 at 101 years old.

Stem Starters:

You may want to consider starting your response using one of these stems. You do not have to do so, but they are here to help you if you need them.

Based on the article, I infer that Katherine Johnson was able to become a NASA engineer because...

Katherine Johnson was able to become a NASA engineer because...

I can tell that Katherine Johnson was able to become a NASA engineer because...

Your Response:



GETTING READY FOR

Modeling Geometric Figures

Understanding the standards and the vocabulary terms in the standards will help you know exactly what you are expected to learn in this module.

CA CC 7.G.1

Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.

Key Vocabulary

scale (*escala*)

The ratio between two sets of measurements.

What It Means to You

You will learn how to calculate actual measurements from a scale drawing.

EXAMPLE 7.G.1

A photograph of a painting has dimensions 5.4 cm and 4 cm. The scale factor is $\frac{1}{15}$. Find the length and width of the actual painting.

$$\begin{aligned} \frac{1}{15} &= \frac{5.4}{\ell} & \frac{1}{15} &= \frac{4}{w} \\ \frac{1 \times 5.4}{15 \times 5.4} &= \frac{5.4}{\ell} & \frac{1 \times 4}{15 \times 4} &= \frac{4}{w} \\ 15 \times 5.4 &= \ell & 15 \times 4 &= w \\ 81 &= \ell & 60 &= w \end{aligned}$$

The painting is 81 cm long and 60 cm wide.

CA CC 7.G.5

Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.

Key Vocabulary

supplementary angles

(*ángulos suplementarios*)

Two angles whose measures have a sum of 180° .

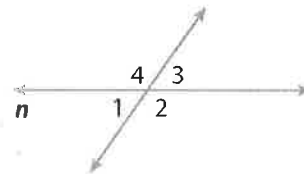
What It Means to You

You will learn about supplementary, complementary, vertical, and adjacent angles. You will solve simple equations to find the measure of an unknown angle in a figure.

EXAMPLE 7.G.5

Suppose $m\angle 1 = 55^\circ$.

Adjacent angles formed by two intersecting lines are supplementary.



$$m\angle 1 + m\angle 2 = 180^\circ$$

$$55^\circ + m\angle 2 = 180^\circ \quad \text{Substitute.}$$

$$\begin{aligned} m\angle 2 &= 180^\circ - 55^\circ \\ &= 125^\circ \end{aligned}$$



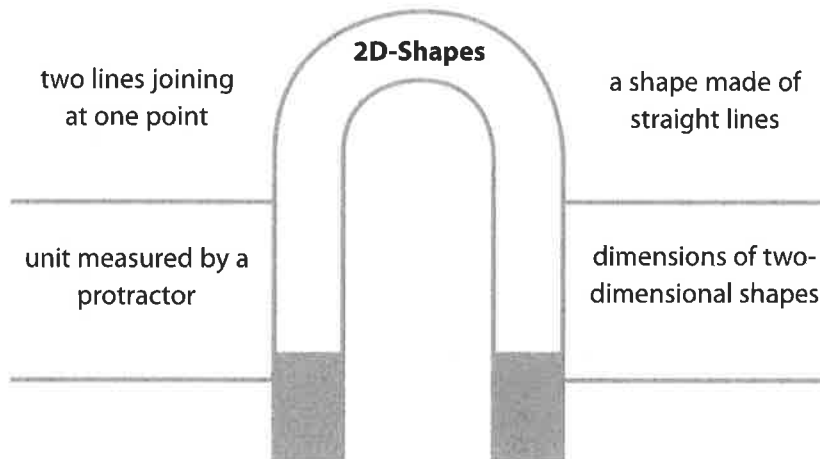
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Reading Start-Up

Visualize Vocabulary

Use the ✓ words to complete the graphic. You may put more than one word on each line.



Understand Vocabulary

Complete each sentence using a preview word.

1. What is a proportional two-dimensional drawing of an object?

2. _____ are angles that have the same measure.
3. _____ are angles whose measures have a sum of 90° .

Vocabulary

Review Words

- ✓ angle (*ángulo*)
- ✓ degree (*grado*)
- dimension (*dimensión*)
- ✓ length (*longitud*)
- proportion (*proporción*)
- ✓ polygon (*polígono*)
- ratio (*razón*)
- ✓ width (*ancho*)

Preview Words

- adjacent angles (*ángulos adyacentes*)
- complementary angles (*ángulos complementarios*)
- congruent angles (*ángulos congruentes*)
- cross section (*sección transversal*)
- intersection (*intersección*)
- scale (*escala*)
- scale drawing (*dibujo a escala*)
- supplementary angles (*ángulos suplementarios*)
- vertical angles (*ángulos verticales*)

Active Reading

Key-Term Fold Before beginning the module, create a key-term fold to help you learn the vocabulary in this module. Write each highlighted vocabulary word on one side of a flap. Write the definition for each word on the other side of the flap. Use the key-term fold to quiz yourself on the definitions in this module.





Using a Scale Drawing to Find Area

Similar shapes are proportional figures that have the same shape but not necessarily the same size.

A **scale drawing** is a proportional two-dimensional drawing that is *similar* to an actual object. Scale drawings can represent objects that are smaller or larger than the actual object.

A **scale** is a ratio between 2 sets of measurements. It shows how a dimension in a scale drawing is related to the actual object. Scales are usually shown as two numbers separated by a colon such as 1:20 or 1 cm:1 m. Scales can be shown in the same unit or in different units.

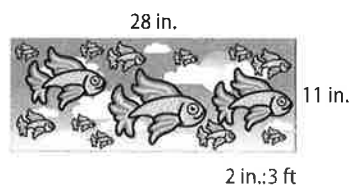
My Notes

EXAMPLE 1



7.G.1, 7.RP.1

The art class is planning to paint a mural on an outside wall. This figure is a scale drawing of the wall. What is the area of the actual wall?



STEP 1 Find the number of feet represented by 1 inch in the drawing.

$$\frac{2 \text{ in.} \div 2}{3 \text{ ft} \div 2} = \frac{1 \text{ in.}}{1.5 \text{ ft}}$$
 The scale 2 in.:3 ft can be represented by the ratio $\frac{2 \text{ in.}}{3 \text{ ft}}$

1 inch in this drawing equals 1.5 feet on the actual wall.

STEP 2 Find the height of the actual wall labeled 11 inches in the drawing.

$$\frac{1 \text{ in.} \times 11}{1.5 \text{ ft} \times 11} = \frac{11 \text{ in.}}{16.5 \text{ ft}}$$

The height of the actual wall is 16.5 ft.

STEP 3 Find the length of the actual wall labeled 28 inches in the drawing.

$$\frac{1 \text{ in.} \times 28}{1.5 \text{ ft} \times 28} = \frac{28 \text{ in.}}{42 \text{ ft}}$$

The length of the actual wall is 42 ft.

STEP 4 Since area is length times width, the area of the actual wall is $16.5 \text{ ft} \times 42 \text{ ft} = 693 \text{ ft}^2$.

Math Talk

Mathematical Practices

How could you solve the example without having to determine the number of feet represented by 1 inch?

Reflect

4. Analyze Relationships Write the scale in Example 1 as a unit rate. Show that this unit rate is equal to the ratio of the height of the drawing to the actual height.

5. Analyze Relationships Write the ratio of the area of the drawing to the area of the actual mural. Write your answer as a unit rate. Show that this unit rate is equal to the square of the unit rate in 4.

YOUR TURN

6. The drawing plan for an art studio shows a rectangle that is 13.2 inches by 6 inches. The scale in the plan is 3 in.:5 ft. Find the length and width of the actual studio. Then find the area of the actual studio.



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EXPLORE ACTIVITY 2



CA CC 7.G.1, 7.RP.2b

Drawing in Different Scales

- A A scale drawing of a meeting hall is drawn on centimeter grid paper as shown. The scale is 1 cm:3 m.

Suppose you redraw the rectangle on centimeter grid paper using a scale of 1 cm:6 m. In the new scale, 1 cm

represents **more than/less than** 1 cm in the old scale.

The measurement of each side of the new drawing will

be **twice/half** as long as the measurement of the original drawing.

- B Draw the rectangle for the new scale 1 cm:6 m.



Reflect

7. Find the actual length and width of the hall using the original scale. Then find the actual length and width of the hall using the new scale. How do you know your answers are correct?

8. Explain how you know that there is a proportional relationship between the first and second drawings.

Guided Practice

1. The scale of a room in a blueprint is 3 in.:5 ft. A wall in the same blueprint is 18 in. Complete the table. (*Explore Activity 1*)

Blueprint length (in.) 3

Actual length (ft)

- a. How long is the actual wall? _____
- b. A window in the room has an actual width of 2.5 feet.
Find the width of the window in the blueprint. _____

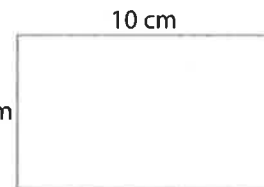
2. The scale in the drawing is 2 in.:4 ft. What are the length and width of the actual room? Find the area of the actual room. (*Example 1*)

7 in.



3. The scale in the drawing is 2 cm:5 m. What are the length and width of the actual room? Find the area of the actual room. (*Example 1*)

6 cm



4. A scale drawing of a cafeteria is drawn on centimeter grid paper as shown. The scale is 1 cm:4 m. (*Explore Activity 2*)

- a. Redraw the rectangle on centimeter grid paper using a scale of 1 cm:6 m.



- b. What is the actual length and width of the cafeteria using the original scale? What are the actual dimensions of the cafeteria using the new scale?



ESSENTIAL QUESTION CHECK-IN

5. If you have an accurate, complete scale drawing and the scale, which measurements of the object of the drawing can you find?

5. Read the sentence.

Pelé, a famous soccer player, is still one of the most celebrated brazilian athletes.

Which underlined word is written incorrectly?

- A. Pelé
- B. soccer
- C. brazilian
- D. athletes

L.7.2.B

6. What part of this sentence is redundant?

"I need to find out what Lisa says about this idea, so let me call her on the phone and see what she says about how many boys are expected."

- A. "to find out"
- B. "about this idea"
- C. "on the phone"
- D. "says about"

L.7.3.A

7. Determine the most likely meaning of the underlined word in the sentence.

She's not at all tall; as a matter of fact, she's quite petite.

The word petite as used in the sentence most likely means:

- A. heavy
- B. small
- C. strong
- D. thin

L.7.4.A

8. An item with a lot of elasticity is something that

- A. is heavy.
- B. is expensive.
- C. can stretch.
- D. can be carried easily.


L.7.4.B

8.1 Independent Practice

 **7.G.1, 7.RP.1, 7.RP.2b**



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Online Practice and Help

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6. Art Marie has a small copy of Rene Magritte's famous painting, *The Schoolmaster*. Her copy has dimensions 2 inches by 1.5 inches. The scale of the copy is 1 in.:40 cm.

a. Find the dimensions of the original painting.

b. Find the area of the original painting.

c. Since 1 inch is 2.54 centimeters, find the dimensions of the original painting in inches.

d. Find the area of the original painting in square inches.

7. A game room has a floor that is 120 feet by 75 feet. A scale drawing of the floor on grid paper uses a scale of 1 unit:5 feet. What are the dimensions of the scale drawing?

8. Multiple Representations The length of a table is 6 feet. On a scale drawing, the length is 2 inches. Write three possible scales for the drawing.

9. Analyze Relationships A scale for a scale drawing is 10 cm:1 mm. Which is larger, the actual object or the scale drawing? Explain.

10. Architecture The scale model of a building is 5.4 feet tall.

a. If the original building is 810 meters tall, what was the scale used to make the model?

b. If the model is made out of tiny bricks each measuring 0.4 inch in height, how many bricks tall is the model?

Name _____ Date _____

Remarks at the Dedication of the Aerospace Medical Health Center, Speech by John F. Kennedy

Analyzing the Text

1. Kennedy refers to his audience with the words _____ and _____. Kennedy uses these words to support his position that _____.

2. Complete the chart with two opposing viewpoints and Kennedy's counterargument for each viewpoint.

Opposing Viewpoints	Kennedy's Counterarguments
Space research has...	Research holds...
Research in space medicine...	Space is a partner and co-producer...

3. How does Kennedy describe the children who might benefit from medical space technology?

Why does Kennedy use this type of language? How is he trying to get his audience to feel?

4. Kennedy shifts his focus from the ways in which medical space research improves life on Earth to _____.

Why does Kennedy shift his focus? Does Kennedy make another claim? Yes/No How is he trying to make his audience feel about the nation?

5. What words does Kennedy repeat?

What does his repetition reinforce in the beliefs of the audience?

6. Is Kennedy's speech effective? Yes/No

How many reasons support his claim? What are they?

Does he support his reasons with evidence? What is the evidence for each reason?

Remarks at the Dedication of the Aerospace Medical Health Center
Speech by John F. Kennedy

Critical Vocabulary

<p>1. If a person's metabolism were not functioning properly, what symptom might be present?</p> <p>a. toned muscles b. labored breathing c. tanned skin d. shiny hair</p>	<p>2. Which condition would be considered an impairment?</p> <p>a. sensitive taste buds b. a slight limp c. 20/20 vision d. a photographic memory</p>
<p>3. Which would NOT serve as an impetus to study harder?</p> <p>a. a chance to play on a team b. a mention on the honor role c. a reward from a parent d. a speech on physical fitness</p>	<p>4. Which task might be the most tedious?</p> <p>a. walking your dog b. redecorating your room c. shopping for groceries d. planning a party</p>

Vocabulary Strategy: Using Context Clues

When you encounter an unfamiliar word, look at its context - or the surrounding words, phrases, or sentences - to try to understand its meaning.

Look at the following example:

We have a long way to go. Many weeks and months and years of long, tedious work lie ahead. The work described as "tedious" is also described as "long" and lasting for "many weeks and months and years." Work that lasts a very long time has the potential to be difficult, boring, or tiring. Checking the word's meaning in the dictionary confirms the tedious means "tiresome" or "boring."

Practice and Apply: Reread Kennedy's speech and find the following words: host, substantial, impairment, profound. Look at the surrounding sentences for clues to each word's meaning. Then fill out a chart like the one shown.

Word	Context clues	Guessed definition	Dictionary definition
host			
substantial			
impairment			
profound			

9. Use context clues, your knowledge of synonyms, and a dictionary or thesaurus to answer the following questions.

Like as the waves make towards the pebb'l'd
shore,
So do our minutes hasten to their end;
Each changing place with that which goes
before,
In sequent toil all forwards do contend.
Nativity, once in the main of light,
Crawls to maturity, wherewith being crown'd,
Crook'd eclipses 'gainst his glory fight,
And Time that gave doth now his gift
confound.
Time doth transfix the flourish set on youth
And delves the parallels in beauty's brow,
Feeds on the rarities of nature's truth,
And nothing stands but for his scythe to mow:
And yet to times in hope my verse shall stand,
Praising thy worth, despite his cruel hand.

Which word is a synonym for the word Nativity in line 5 of Sonnet 60?

- A. birth
- B. childhood
- C. ignorance
- D. nationality

L.7.4.C

10. Direction: Use context clues to determine the meaning of the underlined word.

She was rich but, because of her parsimonious nature, she hated to spend as much as a nickel, even for things she needed.

- A. cruel
- B. stingy
- C. practical
- D. generous

L.7.4.D

11. Read the sentence.

The mouse would always run away from its nemesis, the cat.

What is the **BEST** meaning for the underlined word?

- A. ally
- B. enemy
- C. equal
- D. companion

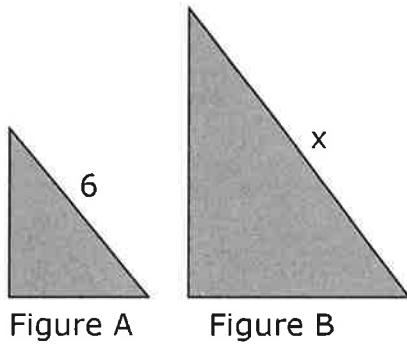
L.7.5.A

Geometry G.1



Name _____

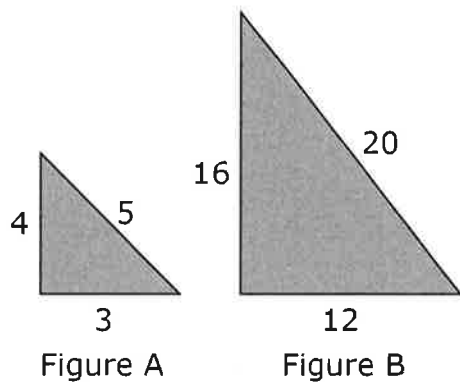
1. Figure A is a scale image of Figure B, as shown.



The scale that maps Figure A onto Figure B is $1:2\frac{1}{3}$. Enter the value of x .

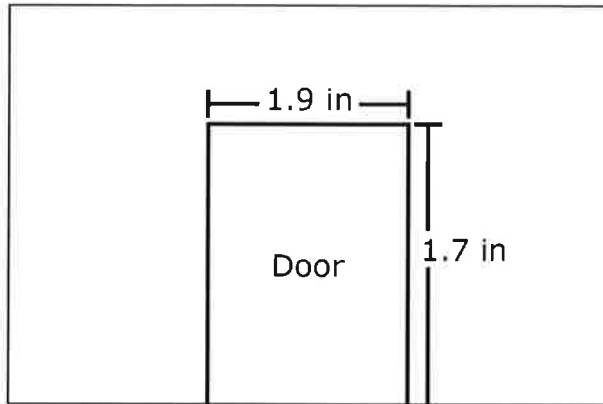
$$x = \boxed{}$$

2. Figure B is a scale image of Figure A, as shown.



Enter the scale factor applied to Figure A to produce Figure B.

3. The front side of an office is shown in this scale drawing. The height of the door in the drawing is 1.7 inches.

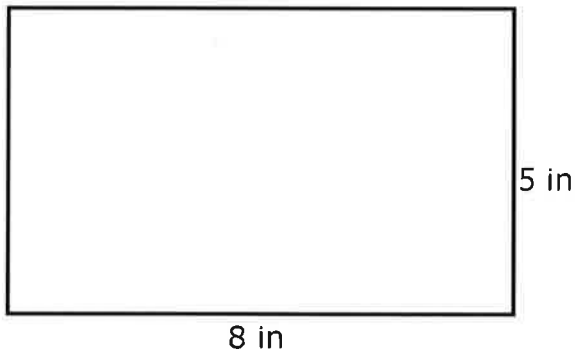


The scale that maps the drawing to the actual office is 1 inch to 2.75 feet.

Using the scale given, enter the actual height, in feet, of the office door.

feet

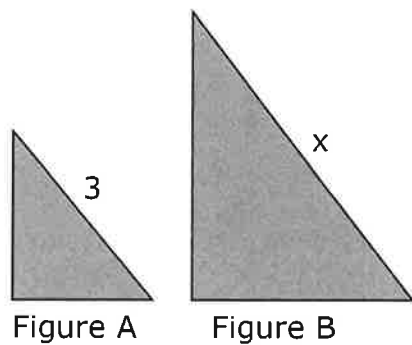
4. This scale drawing of a rectangular picture has dimensions 8 inches by 5 inches. The length of the longer side of the actual picture is 40 feet.



Enter the area, in square feet, of the actual picture.

square feet

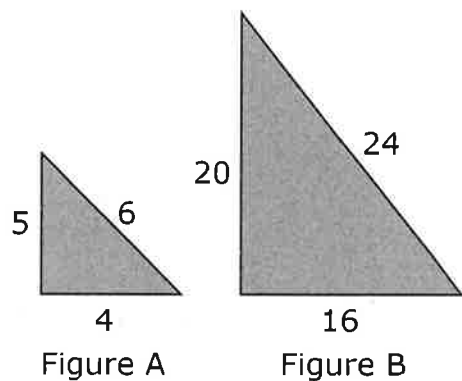
5. Figure A is a scale image of Figure B, as shown.



The scale that maps Figure A onto Figure B is $1:4\frac{1}{2}$. Enter the value of x .

$x =$

6. Figure B is a scale image of Figure A, as shown.



Enter the scale factor applied to Figure A to produce Figure B.



Photo credit: © 2011 / Jupiterimages Corporation

Dental hygienists are health professionals who clean and examine teeth and gums.

Lexile	
Grade	Meets
7	970-1120
8	1010-1185

A Job To Sink Your Teeth Into Lexile 1080-1180

WASHINGTON, D.C. (Achieve3000, November 1, 2010). A daily regimen of brushing and flossing is essential to maintaining healthy teeth and gums. But to keep your teeth in the best condition possible, you'll also need regular cleanings from a *dental hygienist*. Dental hygienists are health professionals who clean and examine teeth and gums in order to prevent oral health problems. If you're interested in a career in healthcare that offers excellent job prospects and a flexible work schedule, this might be the job for you.

Here's more information about a career as a dental hygienist:

Job Duties

Dental hygienists provide a variety of dental services. They clean teeth by removing soft and hard deposits such as tartar, stains, and plaque, and examine a patient's teeth for the presence of any abnormalities. Hygienists provide preventive dental care, such as teaching patients how to practice

Target 9 Central Ideas

1. Which statement best reveals the central idea of the first paragraph under subheading 1?

- (A) An explanation of how dental hygienists clean teeth
- (B) An explanation of the tasks that dental hygienists perform by state.
- (C) A description of how dental hygienists examine teeth
- (D) A description of the variety of services provided by dental hygienists

Target 8 Key Details

2. Which evidence from the text best supports the idea that many dental offices are hiring hygienists?

- (A) Job opportunities are expected to grow 36% through 2018.
- (B) Half of all dental hygienists choose to work part time.
- (C) Demand for dental services is increasing as the population grows.
- (D) Many dental hygienists work for less than \$44,180.

<p>good oral hygiene. They also demonstrate the correct techniques for brushing and flossing teeth, and help patients select proper toothbrushes.</p> <p>The specific tasks that dental hygienists perform vary by state. In some states, hygienists are permitted to work chair-side with dentists during more intricate treatments. For example, they might place and carve filling materials for cavities, remove sutures, and deliver anesthetics using syringes. Some states also allow hygienists to make diagnoses or prepare laboratory tests for the dentist to interpret.</p> <p>Important Skills</p> <p>Dental hygienists need to have excellent interpersonal skills, as they work closely with dentists, dental assistants, and patients. Hygienists must sometimes explain oral hygiene or treatment plans to patients. Therefore, they should also have excellent communication skills.</p> <p>Because dental hygienists use sharp instruments inside patients' mouths, with little room for error, they should have good manual dexterity. Hygienists should be comfortable using an assortment of tools and devices in their daily routine. These tools include rotary instruments and ultrasonic devices to clean and polish teeth. Hygienists also use X-ray machines to take dental pictures.</p> <p>Dental hygienists must exercise great care and precision in their work to limit the risk of injury to patients. They must also practice strict adherence to important health safeguards while on the job. This includes following proper procedures when taking X-rays and using appropriate protective devices when administering anesthetics.</p>	<p>Target 11 Reasoning and Evaluation</p> <p>This question has two parts.</p> <p>Part A</p> <p>3. Which of these inferences about work hours is supported by the text?</p> <p>(A) Dental hygienists work full time.</p> <p>(B) Dental hygienists work only in the evenings and weekends.</p> <p>(C) Dental hygienists have flexible work schedules.</p> <p>(D) More than half of dental hygienists work part time.</p> <p>Part B</p> <p>Which sentence from the text best illustrate the inference drawn in Part A?</p> <p>(A) Many hygienists hold jobs in more than one dental office.</p> <p>(B) Most dental offices give hygienists the option of working full time or part time, sometimes in the evenings or on weekends.</p> <p>(C) Dental hygienists work on eight-hour shifts.</p> <p>(D) Dental hygienists work more than 35 hours per week.</p>
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Schooling

All hygienists must obtain a degree or certificate from dental hygiene school before entering professional practice. Specific entrance requirements to these programs typically vary from one school to another, though programs require a high school diploma and college entrance test scores for admission.

**What's a BA?
What's an MA?
What's a PhD?
???**



**Click here
to find out.**

In addition to graduation from an accredited program, dental hygienists must be licensed by the state in which they practice. Nearly all states require that candidates pass a written examination administered by the American Dental Association, as well as a regional or state clinical board examination, to obtain licensure.

Hours

Many dental hygienists have the opportunity to work in an atmosphere with a flexible schedule. Most dental offices give hygienists the option of working full time or part time, sometimes in the evenings or on weekends. Dentists frequently hire hygienists to work only two or three days a week. As a result, many hygienists hold jobs in more than one dental office. In a recent survey, about half of all dental hygienists worked part time (less than 35 hours a week).

Target 10 Word Meaning

4. Read the sentences.

They must also practice strict adherence to important health safeguards while on the job. This includes following proper procedures when taking X-rays and using appropriate protective devices when administering anesthetics.

Which word best states the meaning of administering?

- (A) Prescribing
- (B) Dispensing
- (C) Monitoring
- (D) Terminating

Target 12 Analysis within/across Texts

5. Read the following sentence:

All hygienists must obtain a degree or certificate from dental hygiene school before entering professional practice.

How does the sentence add to the development of the text?

- (A) It explains the educational requirements necessary to become a dental hygienist.
- (B) It describes the interpersonal skills needed to be a successful dental hygienist.
- (C) It summarizes the education, training, and job responsibilities of a dental hygienist.
- (D) It informs the reader of the growing demand for dental hygienists in the US.

<p>Earnings</p> <p>According to the latest government data, the median annual wage for dental hygienists is \$66,570. The middle 50 percent earned between \$55,220 and \$78,990, while the lowest 10 percent earned less than \$44,180, and the highest 10 percent earned more than \$91,470.</p> <p>Job Outlook</p> <p>As the population continues to grow, many dental offices are hiring dental hygienists to keep up with the demand for services. In fact, a job as a dental hygienist is ranked among the fastest-growing career fields in the United States. Employment opportunities are expected to grow 36 percent through 2018, which is much faster than the average for all occupations.</p> <p>Dictionary</p> <p>dexterity (<i>noun</i>) skillful use of the hands or the brain</p> <p>diagnosis (<i>noun</i>) the identifying of an illness or disorder in a patient through physical examination, medical tests, or other procedures</p> <p>regimen (<i>noun</i>) prescribed course of exercise, way of life, and/or diet</p> <p>rotary (<i>adjective</i>) related to something that spins or turns like a wheel</p> <p>suture (<i>noun</i>) the material that is used to close a wound or opening after a surgery</p>	<p>Target 13 Text Structures and Features</p> <p>6. Read the sentences.</p> <p>They clean teeth by removing soft and hard deposits such as tartar, stains, and plaque, and examine a patient's teeth for the presence of any abnormalities. Hygienists provide preventive dental care, such as teaching patients how to practice good oral hygiene. They also demonstrate the correct techniques for brushing and flossing teeth, and help patients select proper toothbrushes.</p> <p>Select the statement that best explains why the author chose to include this paragraph.</p> <p>Ⓐ It describes the intricate treatments that dental hygienists in some states provide.</p> <p>Ⓑ It explains why dental hygienists must pass the American Dental Association's examination.</p> <p>Ⓒ It explains why it is important for dental hygienists to have excellent interpersonal skills.</p> <p>Ⓓ It describes the various services that are performed by dental hygienists.</p>
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Target 14 Language Usage
7. Read the title of the text.

“A Job to Sink Your Teeth Into”

What statement best describes what the figurative language in the title adds to the meaning of the text?

- A** It suggests that the text mainly provides information about taking care of the teeth.
- B** It suggests that becoming a dental hygienist is a career one can become completely involved in.
- C** It suggests that becoming a dental hygienist offers excellent job prospects.
- D** It suggests that the job of a dental hygienists involve preventive dental care.

Claim 2 Target 9 Edit Clarify (conventions)

8. Read the following sentences that has three errors in spelling. Then read the question that follows.

Specific entranse requirements to these programs typically vary from one school to another, though programs require a high school diploma and college entrance test scores for admission.

Which sentence corrects all the spelling errors?

- A** Specific entrance requirements to these programs typically vary from one school to another, though programs require a high school diploma and college entrance test scores for admission.
- B** Specific entranse requirements to these programs typically vary from one school to another, though programs require a high school diploma and college entrance test scores for admission.
- C** Specific entrance requirements to these programs typically vary from one school to another, though programs require a high school diploma and college entrance test scores for admission.
- D** Specific entranse requirements to these programs typically vary from one school to another, though programs require a high school diploma and college entrance test scores for admission.

12. What is the BEST meaning of the underlined figure of speech?

She felt light as a feather after turning in all of her homework.

- A. relieved
- B. accomplished
- C. grateful
- D. airy

L.7.5.A

13. Read the sentence.

London said of himself, "I would rather be a superb meteor, every atom of me in magnificent glow, than a sleepy and permanent planet."

Which type of figurative language does he employ in this statement?

- A. metaphor
- B. personification
- C. alliteration
- D. simile

L.7.5.A

14. Read the paragraph

The odds were against her. There was no money for a boat or supplies, and Naomi had only six weeks of sailing experience. Inspired by her determination, however, Rob backed her. He persuaded Sir Charles Blyth, whom he worked for, to lend her his boat the Express Crusader. Her trip was sponsored by the Daily Express, a British newspaper.

Which pair of words has the same relationship as backed and sponsored as they are used in this sentence?

- A. budget- supplies
- B. persuaded- discouraged
- C. determination-conviction
- D. sailing- boat

L.7.5.B



GETTING READY FOR

Circumference, Area, and Volume

Understanding the standards and the vocabulary terms in the standards will help you know exactly what you are expected to learn in this module.

CA CC 7.G.6

Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.

Key Vocabulary

circumference (*circunferencia*)
The distance around a circle.

What It Means to You

You will use formulas to solve problems involving the area and circumference of circles.

EXAMPLE 7.G.6

Lily is drawing plans for a circular fountain. The diameter of the fountain is 20 feet. What is the approximate circumference?

$$C = \pi d$$

$$C \approx 3.14 \cdot 20 \quad \text{Substitute.}$$

$$C \approx 62.8$$

The circumference of the fountain is about 62.8 feet.

CA CC 7.G.4

Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.

Key Vocabulary

volume (*volumen*)
The number of cubic units inside a three-dimensional solid.

surface area (*área total*)
The sum of the areas of all the surfaces of a three-dimensional solid.

What It Means to You

You will find area, volume and surface area of real-world objects.

EXAMPLE 7.G.4

Find the volume and the surface area of a tissue box before the hole is cut in the top.

The tissue box is a right rectangular prism. The base is $4\frac{3}{8}$ in. by $4\frac{3}{8}$ in. and the height is 5 in.



Use the volume and surface area formulas:

B is the area of the base, h is the height of the box, and P is the perimeter of the base.

$$\begin{aligned} V &= Bh \\ &= \left(4\frac{3}{8} \cdot 4\frac{3}{8}\right)5 \\ &= 95\frac{45}{64} \text{ in}^3 \end{aligned}$$

$$\begin{aligned} S &= 2B + Ph \\ &= 2\left(4\frac{3}{8} \cdot 4\frac{3}{8}\right) + \left(4 \cdot 4\frac{3}{8}\right)5 \\ &= 125\frac{25}{32} \text{ in}^2 \end{aligned}$$

The volume is $95\frac{45}{64} \text{ in}^3$ and the surface area is $125\frac{25}{32} \text{ in}^2$.



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9.1 Circumference

Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.



ESSENTIAL QUESTION

How do you find and use the circumference of a circle?

EXPLORE ACTIVITY

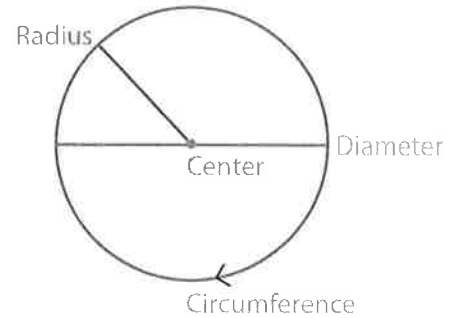
Exploring Circumference

A circle is a set of points in a plane that are a fixed distance from the center.

A **radius** is a line segment with one endpoint at the center of the circle and the other endpoint on the circle. The length of a radius is called the radius of the circle.

A **diameter** of a circle is a line segment that passes through the center of the circle and whose endpoints lie on the circle. The length of the diameter is twice the length of the radius. The length of a diameter is called the diameter of the circle.

The **circumference** of a circle is the distance around the circle.



- A Use a measuring tape to find the circumference of five circular objects. Then measure the distance across each item to find its diameter. Record the measurements of each object in the table below.**

Object	Circumference C	Diameter d	$\frac{C}{d}$

- B Divide the circumference of each object by its diameter. Record your answer, rounded to the nearest hundredth, in the table above.**

Reflect

- 1. Make a Conjecture** Describe what you notice about the ratio $\frac{C}{d}$ in your table.



Finding Circumference

The ratio of the circumference to the diameter $\frac{C}{d}$ is the same for all circles. This ratio is called π or *pi*, and you can approximate it as 3.14 or as $\frac{22}{7}$. You can use π to find a formula for circumference.

For any circle, $\frac{C}{d} = \pi$. Solve the equation for C to give an equation for the circumference of a circle in terms of the diameter.

$\frac{C}{d} = \pi$ The ratio of the circumference to the diameter is π .

$\frac{C}{d} \times d = \pi \times d$ Multiply both sides by d .

$C = \pi d$ Simplify.

The diameter of a circle is twice the radius. You can use the equation $C = \pi d$ to find a formula for the circumference C in terms of the radius r .

$C = \pi d = \pi(2r) = 2\pi r$

The two equivalent formulas for circumference are $C = \pi d$ and $C = 2\pi r$.

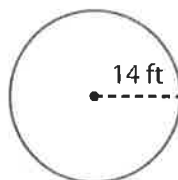
EXAMPLE 1



7.G.4

An irrigation sprinkler waters a circular region with a radius of 14 feet. Find the circumference of the region watered by the sprinkler. Use $\frac{22}{7}$ for π .

Use the formula.



$C = 2\pi r$ The radius is 14 feet.

$C = 2\pi(14)$ Substitute 14 for r .

$C \approx 2\left(\frac{22}{7}\right)(14)$ Substitute $\frac{22}{7}$ for π .

$C \approx 88$ Multiply.

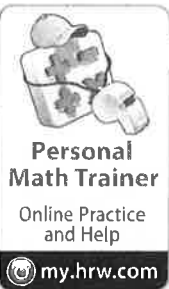
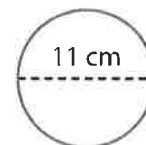
The circumference of the region watered by the sprinkler is about 88 feet.

Reflect

2. **Analyze Relationships** When is it logical to use $\frac{22}{7}$ instead of 3.14 for π ?

YOUR TURN

3. Find the circumference of the circle to the nearest hundredth.



Using Circumference

Given the circumference of a circle, you can use the appropriate circumference formula to find the radius or the diameter of the circle. You can use that information to solve problems.



EXAMPLE 2



CA CC 7.G.4

A circular pond has a circumference of 628 feet. A model boat is moving directly across the pond, along a radius, at a rate of 5 feet per second. How long does it take the boat to get from the edge of the pond to the center?

My Notes

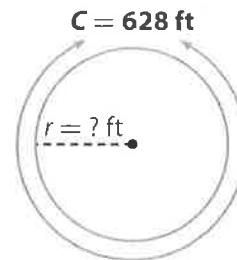
STEP 1 Find the radius of the pond.

$$C = 2\pi r \quad \text{Use the circumference formula.}$$

$$628 \approx 2(3.14)r \quad \text{Substitute for the circumference and for } \pi.$$

$$\frac{628}{6.28} \approx \frac{6.28r}{6.28} \quad \text{Divide both sides by 6.28.}$$

$$100 \approx r \quad \text{Simplify.}$$



The radius is about 100 feet.

STEP 2 Find the time it takes the boat to get from the edge of the pond to the center along the radius.

$$100 \div 5 = 20 \quad \text{Divide the radius of the pond by the speed of the model boat.}$$

It takes the boat about 20 seconds to get to the center of the pond.

Sample answer: $\frac{22}{7}$, which is compatible with 44 when you solve for d

Reflect

4. **Analyze Relationships** Dante checks the answer to Step 1 by multiplying it by 6 and comparing it with the given circumference. Explain why Dante's estimation method works. Use it to check Step 1.
 $\pi \approx 3$, so $C = 2\pi r \approx 6r$; $6(100) = 600$ is close to 628.

5. **What if?** Suppose the model boat were traveling at a rate of 4 feet per second. How long would it take the model boat to get from the edge of the pond to the center? about 25 seconds

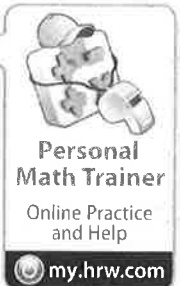
Math Talk

Mathematical Practices

What value will you substitute for π to find the diameter of the garden? Explain.

YOUR TURN

6. A circular garden has a circumference of 44 yards. Lars is digging a straight line along a diameter of the garden at a rate of 7 yards per hour. How many hours will it take him to dig across the garden?
about 2 hours



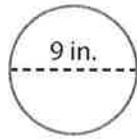
Guided Practice

Find the circumference of each circle. (Example 1)

1. $C = \pi d$

$C \approx$ _____

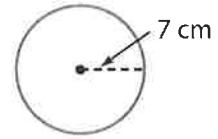
$C \approx$ _____ inches



2. $C = 2\pi r$

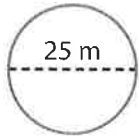
$C \approx 2\left(\frac{22}{7}\right) (\text{_____})$

$C \approx$ _____ cm

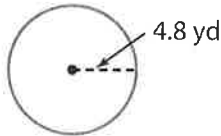


Find the circumference of each circle. Use 3.14 or $\frac{22}{7}$ for π . Round to the nearest hundredth, if necessary. (Example 1)

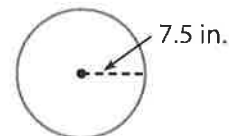
3.



4.



5.



6. A round swimming pool has a circumference of 66 feet. Carlos wants to buy a rope to put across the diameter of the pool. The rope costs \$0.45 per foot, and Carlos needs 4 feet more than the diameter of the pool. How much will Carlos pay for the rope? (Example 2)

Find the diameter.

$C = \pi d$

_____ $\approx 3.14d$



$\frac{\quad}{3.14} \approx \frac{3.14d}{3.14}$

_____ $\approx d$

Find the cost.

Carlos needs _____ feet of rope.

_____ $\times \$0.45 =$ _____

Carlos will pay _____ for the rope.

Find each missing measurement to the nearest hundredth. Use 3.14 for π . (Examples 1 and 2)

7. $r =$ _____

$d =$ _____

$C = \pi r$

8. $r \approx$ _____

$d \approx$ _____

$C = 78.8$ ft

9. $r \approx$ _____

$d \approx 3.4$ in.

$C =$ _____



ESSENTIAL QUESTION CHECK-IN

10. Norah knows that the diameter of a circle is 13 meters. How would you tell her to find the circumference?


9.1 Independent Practice

 CA CC 7.G.4



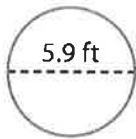
Personal Math Trainer

Online Practice and Help

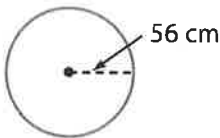
 my.hrw.com

For 11–13, find the circumference of each circle. Use 3.14 or $\frac{22}{7}$ for π . Round to the nearest hundredth, if necessary.

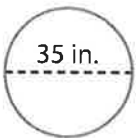
11.



12.



13.



14. In Exercises 11–13, for which problems did you use $\frac{22}{7}$ for π ? Explain your choice.

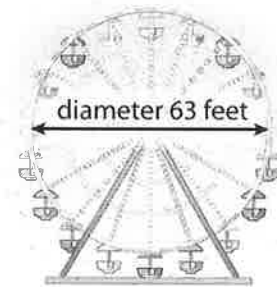
15. A circular fountain has a radius of 9.4 feet. Find its diameter and circumference to the nearest tenth.

16. Find the radius and circumference of a CD with a diameter of 4.75 inches.

17. A dartboard has a diameter of 18 inches. What are its radius and circumference?

18. **Multistep** Randy's circular garden has a radius of 1.5 feet. He wants to enclose the garden with edging that costs \$0.75 per foot. About how much will the edging cost? Explain.

19. **Represent Real-World Problems** The Ferris wheel shown makes 12 revolutions per ride. How far would someone travel during one ride?



20. The diameter of a bicycle wheel is 2 feet. About how many revolutions does the wheel make to travel 2 kilometers? Explain. Hint: 1 km \approx 3,280 ft

21. **Multistep** A map of a public park shows a circular pond. There is a bridge along a diameter of the pond that is 0.25 mi long. You walk across the bridge, while your friend walks halfway around the pond to meet you at the other side of the bridge. How much farther does your friend walk?

Lexile	
Grade	Meets
7	970-1120
8	1010-1185



Can You Take the Heat? Lexile 980-1080

WASHINGTON, D.C. (Achieve3000, August 27, 2009). A firefighter's job title is perhaps one of the most misleading. While firefighters are frequently dispatched to extinguish blazes, they are tasked with a variety of other duties, including the rendering of medical treatment. Although the work can be stressful and the shifts can be long, many firefighters say their job is rewarding; they know they are helping to protect people and the community.

Target 9 Central Ideas

1. Which statement best reveals the central idea of the text?

- A Firefighters have little work and high income.
- B Firefighters have the most competitive career.
- C Firefighters have special training to perform specific job duties.
- D Firefighters have fewer jobs.

Target 8 Key Details

2. Which evidence from the text best supports the idea that job opportunities for firefighters are expected to increase?

- A Many people will be needed to replace firefighters who retire or become injured on the job.
- B Many current firefighters are being specially trained to handle emergencies such as oil spills.
- C Many volunteer firefighting positions will be changing to paid firefighting positions.
- D Many people are being hired to provide urgent medical treatment during emergencies.

Job Duties	Target 11 Reasoning and Evaluation
<p>Whether it's three in the morning or there's three feet of snow blanketing the ground, firefighters must immediately respond to fires, motor vehicle accidents, medical crises, natural disasters, and other emergencies. At the scene of a blaze, firefighters operate water pumps and maneuver heavy, high-pressure hoses. They may also be required to climb ladders and break through doors and walls to enter burning buildings. At the scene of a crash, firefighters may extract victims from vehicles and direct traffic. At emergency scenes of all types, firefighters may be called on to provide urgent medical treatment. This includes first aid and CPR. They may need to treat people suffering from smoke inhalation, injuries, heart attacks, and other health emergencies.</p> <p>Some firefighters are specially trained to respond to forest fires. This strenuous work often involves enclosing the blaze by creating fire lines, which deprive the fire of fuel and prevent its spread. To create fire lines, firefighters may remove combustible material in the path of the blaze by chopping down trees and removing vegetation surrounding the fire. Some firefighters, called "smoke jumpers," assist in the containment of forest fires by parachuting into remote locations that would otherwise be inaccessible.</p> <p>Other firefighters are specially trained to handle emergencies involving hazardous materials. These</p>	<p>This question has two parts.</p> <p>Part A</p> <p>3. Read the sentences below.</p> <p>While working inside burning buildings, firefighters face threats such as floors and walls giving way. In addition, firefighters are sometimes hurt in traffic accidents while on the job.</p> <p>What is most likely the author's intent for writing this information?</p> <p>(A) The author wants to explain why some firefighters earn \$70,000 a year while others earn less.</p> <p>(B) The author wants to provide an explanation as to why firefighters must obtain medical training.</p> <p>(C) The author wants to demonstrate that firefighters must be prepared to handle hazardous materials.</p> <p>(D) The author wants to describe some of the risks firefighters face while performing their work.</p> <p>Part B</p> <p>Which section from the text best supports your answer in Part A?</p> <p>(A) Abilities and Personal Qualities</p> <p>(B) Job Duties</p> <p>(C) Education and Training</p> <p>(D) Hours</p>

firefighters may clean up oil spills, for example, or contain releases of toxic chemicals.

Firefighters face a high risk of injury or death while performing their work. They may be exposed to hazardous chemicals, contagious diseases, fire, and smoke. While working inside burning buildings, firefighters face threats such as floors and walls giving way. In addition, firefighters are sometimes hurt in traffic accidents while on the job.

Abilities and Personal Qualities

Carrying fire-fighting equipment and rescuing survivors is rigorous work. Therefore, firefighters must be strong and physically fit. It is also crucial for firefighters to possess mechanical aptitude. They must have the ability to maintain composure, as they will need to think clearly, make

decisions quickly, and remember their training during intense situations. Firefighters must be reliable and work

What's a BA?
What's an MA?
What's a PhD?
???



Click here
to find out.

Target 10 Word Meaning

4. Read the sentence below.

They may be exposed to hazardous chemicals, contagious diseases, fire, and smoke.

Which word best states the meaning of the word contagious?

- (A) Malicious
- (B) Microbial
- (C) Incurable
- (D) Infectious

Target 12 Analysis within/across Texts

5. Based on what you read in this article. What does the information presented in the text reveal about the author's purpose?

- (A) To reveal that firefighters need to be creative and have strong math skills.
- (B) To explain why firefighters who work in cities don't need medical skills.
- (C) To summarize the education, training, and job duties of firefighters.
- (D) To inform people that the demand for firefighters is expected to decline.

well as part of a team. They must also possess a strong desire to help people.

Education and Training

A majority of employers require prospective firefighters to have a high school diploma. Fire departments are increasingly seeking candidates who have pursued additional education, such as classes in fire engineering or fire science at a university or community college. In addition, prospective firefighters are usually required to pass a written test, a medical exam, and a fitness evaluation. Once hired, firefighters receive considerable training in areas such as fire prevention, firefighting procedures, and emergency medical techniques.

Hours

Fire departments have various work requirements. At some departments, firefighters work a 24-hour shift that is followed by 48 hours off. At other departments, firefighters work 10- to 14-hour shifts. Firefighters usually work about 50 hours per week. They often work nights weekends, and holidays. Firefighters may also be required to remain at emergency scenes for extended hours—or even days.

Salary

Target 13 Text Structures and Features

6. What is the most likely reason the author included subheadings in the text?

- (A)** To help the reader define key terms.
- (B)** To help the reader summarize and compare information.
- (C)** To help the reader navigate through sections of the text.
- (D)** To help the reader understand information in a visual way.

Target 14 Language Usage

7. Read the title of the text.

“Can You Take the Heat?”

What does the phrase take the heat suggest about the author’s information provided in the text?

- (A)** It suggests that the job of a firefighter is to protect and help people.
- (B)** It suggests that the job of a firefighter requires an education.
- (C)** It suggests that the job of a firefighter requires medical skills.
- (D)** It suggests that the job of a firefighter is very demanding.

According to the latest data from the U.S. Bureau of Labor Statistics (BLS), the median annual income for firefighters is about \$45,000. Salaries range from less than \$25,000 to more than \$70,000 per year. People in upper level positions, such as fire chiefs, may earn salaries of nearly \$105,000 per year.

Job Outlook

In 2008, more than 300,000 people held jobs as firefighters. According to the BLS, job opportunities for firefighters are expected to increase by 19 percent by 2018, primarily due to the conversion of volunteer firefighting positions to paid positions.

Despite the job growth, however, candidates for firefighting positions will continue to face heavy competition. To get a leg up, prospective firefighters are encouraged to maintain physical fitness levels, take firefighting classes at a community college or university, and obtain medical training.

Dictionary

- composure (*noun*) a calm state of mind
- crucial (*adjective*) extremely important
- inaccessible (*adjective*) unable to be reached
- rigorous (*adjective*) having harsh and unrelenting demands

Claim 2 Target 9 Edit Clarify (conventions)

8. Choose the sentence that is punctuated correctly.

- A Jorge Torres, our chief was born in California.
- B I was one, of over three hundred people, who attended the sold-out event.
- C Firefighters often work nights weekends, and holidays.
- D The fire started on June 5, 2014 in Downey, California.

15. Read the sentence from "The United States in World War II: Food on the Home Front."

"This tremendous effort helped people eat well and allowed factories to send more canned goods to American soldiers abroad."

Which word could **BEST** replace the underlined word as it is used in this sentence?

- A. large
- B. great
- C. terrific
- D. giant

L.7.5.C

16. Read the paragraph.

It wasn't until I met Ms. Hannigan that I finally found the courage to try swimming. Ms. Hannigan was my swimming teacher. My parents, having tried so many methods to entice me into the pool, heard of this teacher who was known as the best swimming teacher in the state. If she couldn't help me, no one could. She basically told me it was down to me. I needed to learn to take the risk, take that first leap. Ms. Hannigan slowly convinced me that I needed to be bold.

What does the word entice suggest about the narrator's parents? Select two.

- A. They were convinced she would swim
- B. They could not decide where she would swim
- C. They wanted her to learn to swim
- D. They would always encourage her to swim

L.7.6*

17. Read the paragraph.

Hawaiian Lava Tube divers use certified partners and constantly monitor their air supply. Basic equipment includes a headlamp, flashlights and backup lights, scuba gear, and a safety line. No special air mixture is necessary. Divers use a normal air-filled scuba tank.

Which phrase defines *certified*?

- A. Guaranteed by a reliable source
- B. Qualified to complete a task
- C. Recognized by a law of a certain region
- D. Formal permission by a government or professional institution

18. Read the sentence.

Because she was late nearly every day, Melanie was discharged from her duties at the library.

Which word most nearly means the same as discharged as it is used in this sentence?

- A. pushed into the air
- B. helped off of
- C. released from
- D. unloaded from

Circumference G.4



Name _____

1. The radius of a circle is 11.9 centimeters.

Enter the area of the circle, in square centimeters. Round your answer to the nearest hundredth.

 square centimeters

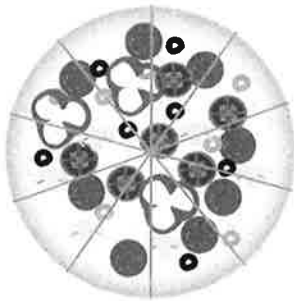
2. A circular donut sign has a radius of 5 feet.

Enter the area, in square feet, of the donut sign. Round your answer to the nearest tenth.

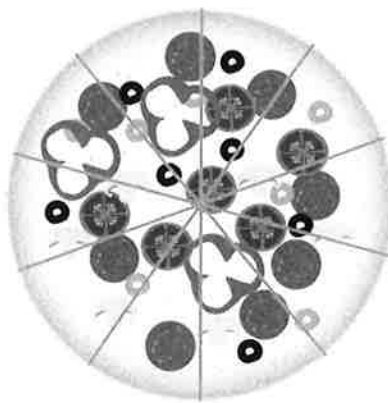
 square feet

3. Mila buys two circular pizzas.

The first pizza has a 10-inch diameter.



The second pizza has a 12-inch diameter.



How much greater, in square inches, is the area of the second pizza than the first pizza? Round your answer to the nearest tenth.

 square inches

