



Compton USD Learning Packet #2

Sixth Grade

Name _____

6th Grade Learning Packet

TABLE OF CONTENTS

Week 3

Day	Lesson	Date Completed
1	1) CATQ #1 - Read My Wonder Horse. Answer questions #1-6. 2) Language Spiral #1 - Answer questions 1-5. 3) My SBAC Coach - Read source #1. Use the highlighter and notepad to write down any notes.	
	Day 1 Go Math 8.3 1) Read through <i>Getting Ready For Percent</i> 2) Complete <i>Reading Start-Up</i> 3) Explore Activity 4) Complete Examples 1 -3 5) Guided Practice - Answer questions 1-6 all	
2	1) CATQ #1 - Reread My Wonder Horse. Answer questions #7-10. 2) Language Spiral #1 - Answer questions 6-9 3) My SBAC Coach - Read source #2. Use the highlighter and notepad to write down any notes.	
	Day 2 Go Math 8.3 1) Independent Practice - Answers questions 11 - 28 all	
3	1) Spiral #1 - Diving Under the Sea Review #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 10-14 3) My SBAC Coach - Read the assignment. Begin drafting your story about "What happened when you worked on YouTube as a master of amazing challenges."	
	1) Next Gen Math Ratio and Proportional Relationships RP.3. Answer questions 1 -7 all	
4	1) Spiral #1 - Diving Under the Sea Review #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 15-17 3) My SBAC Coach - Read the assignment. Edit and revise your story about "What happened when you worked on YouTube as a master of amazing challenges."	
	Day 1 Go Math 16.1 1) Read through <i>Getting Ready For Displaying Analyzing, and Summarizing Data</i>	

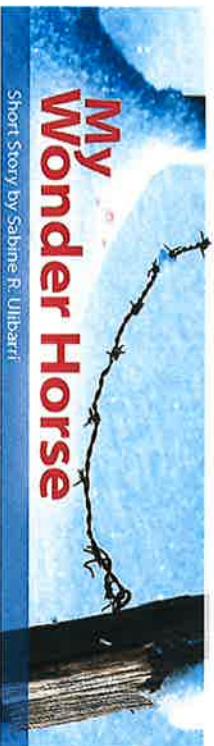
	2) Complete <i>Reading</i> Start-Up 3) Explore Activity 1 4) Example 1 5) Explore Activity 2 6) Guided Practice - Answer questions 1-4 all	
5	1) Spiral #1 - Diving Under the Sea Review #3. Read the selection. Answer questions 1-8 Remember to use key details from the text to support your answer. 2) My SBAC Coach - Rewrite and publish your story about "What happened when you worked on YouTube as a master of amazing challenges."	
	Day 2 Go Math 16.1 1) Independent Practice - Answers questions 5 - 14 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

Collection 4: Making Your Voice Heard

Anchor Text #1: My Wonder Horse

LEXILE: 610L



He was white. White as memories lost. He was free. Free as happiness is. He was fantasy, liberty, and excitement. He filled and dominated the mountain valleys and surrounding plains. He was a white horse that flooded my youth with dreams and poetry.

Around the campfires of the country and in the sunny patios of the town, the ranch hands talked about him with enthusiasm and admiration. But gradually their eyes would become hazy and blurred with dreaming. The lively talk would die down. All thoughts fixed on the vision evoked by the horse. Myth of the animal kingdom. Poem of the world of men.

White and mysterious, he paraded his harem through the summer forests with lordly rejoicing. Winter sent him to the plains and the summer forests with lordly rejoicing. Winter sent him sheltered hillsides for the protection of his females. He spent the summer like an Oriental potentate in his woodland gardens. The

1. **Claim 1, Target 2: Central Ideas, Standard: RL.6.2**

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

- (A) Horses are similar to people.
- (B) Horses are not meant to be caged.
- (C) You cannot capture or imprison freedom.
- (D) There is a price to pay for freedom.

2. **Claim 1, Target 1: Key Details, Standard: RL.6.1**

Which sentence from the text **best** supports narrator's feeling that dreaming was an escape from reality?

- (A) "He was a white horse that flooded my youth with dreams and poetry. "
- (B) "The stories told of the Wonder Horse were endless. "
- (C) "I came back from the land of dreams to the world of toil. "
- (D) "That night under the stars I didn't sleep. I dreamed. "

winter he passed like an illustrious warrior celebrating a well-earned victory.

He was a legend. The stories told of the Wonder Horse were endless. Some true, others fabricated. So many traps, so many snares so many searching parties, and all in vain. The horse always escaped, always mocked his pursuers, and always rose above the control of man. Many a valiant cowboy swore to put his halter and his brand on the animal. But always he had to confess later that the mystic horse was more of a man than he.

I was fifteen years old. Although I had never seen the Wonder Horse, he filled my imagination and fired my ambition. I used to listen open-mouthed as my father and the ranch hands talked about the phantom horse who turned into mist and air and nothingness when he was trapped. I joined in the universal obsession—like the hope of winning the lottery—of putting my lasso on him some day, of capturing him and showing him off on Sunday afternoons when the girls of the town strolled through the streets.

It was high summer. The forests were fresh, green, and gay. The cattle moved slowly, fat and sleek in the August sun and shadow. Listless and drowsy in the lethargy of late afternoon, I was dozing on my horse. It was time to round up the herd and go back to the good bread of the cowboy camp. Already my comrades would be sitting around the campfire, playing the guitar, telling stories of past or present, or surrendering to the languor of the late afternoon. The sun was setting behind me in a riot of streaks and colors. Deep, Deep, harmonious silence.

3. Claim 1, Target 4: Reasoning and Evidence, **Standard:** RL.6.1

This question has two parts. First, answer part A. Then, answer part B.

What conclusion can be drawn about the narrator’s internal struggle with capturing the white horse?

- Ⓐ The narrator is so obsessed with finding the white horse that he even dreams about it.
- Ⓑ The narrator is so obsessed with finding the white horse that he never sleeps in order to capture it.
- Ⓒ The narrator is indifferent with finding the white horse, so he daydreams about other adventures he wants go on.
- Ⓓ The narrator is indifferent with finding the white horse, so he abandons the quest.

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

- Ⓐ “Some true, others fabricated. So many traps, so many snares so many searching parties, and all in vain.”
- Ⓑ “That night under the stars I didn’t sleep. I dreamed.”
- Ⓒ “A picture of burning beauty and virile freedom.”
- Ⓓ “I was going in search of the white light that galloped through my dreams.”

I sit drowsily still forgetting the cattle in the glade. Suddenly the forest falls silent, a deafening quiet. The afternoon comes to a standstill. The breeze stops blowing, but it vibrates. The sun flares hotly. The planet, life, and time itself have stopped in an inexplicable way. For a moment, I don't understand what is happening.

Then my eyes focus. There he is! The Wonder Horse! At the end of the glade, on high ground surrounded by summer green. He is a statue. He is an engraving. Line and form and white stain on a green background. Pride, prestige, and art incarnate in animal flesh. A picture of burning beauty and virile freedom. An ideal, pure and invincible, rising from the eternal dreams of humanity. Even today my being thrills when I remember him.

A sharp neigh. A far-reaching challenge that soars on high, ripping the virginal fabric of the rosy clouds. Ears at the point. Eyes flashing. Tail waving active defiance. Hoofs glossy and destructive. Arrogant ruler of the countryside.

The moment is never-ending, a momentary eternity. It no longer exists, but it will always live. . . . There must have been mares. I did not see them. The cattle went on their indifferent way. My horse followed them, and I came slowly back from the land of dreams to the world of toil. But life could no longer be what it was before.

That night under the stars I didn't sleep. I dreamed. How much I dreamed awake and how much dreamed asleep, I do not know. I only know that a white horse occupied my dreams

4. Claim 1, Target 3: Word Meaning, **Standard:** RL.6.1

Read the sentence from the text. What does the word **mystic** most likely mean?

"But always he had to confess later that the **mystic** horse was more of a man than he."

- (A) investigating the unknown
- (B) visualizing a magical dream
- (C) inspiring a sense of mystery and wonder
- (D) interpreting a mysterious dream

5. Claim 1, Target 5: Analysis within/across Texts, **Standard:** RL.6.1
Which statement best describes how the relationship between the narrator and the wild horse change over the course of the text?

- (A) In the beginning of the story the narrator is obsessed with capturing the wild horse, but over the course of the text, he begins to want to see the horse become his equal.
- (B) In the beginning of the story the narrator is obsessed with capturing the wild horse, but over the course of the text, he begins to want to see the horse joy freedom.
- (C) In the beginning of the story the narrator is indifferent with capturing the wild horse, but over the course of the text, he becomes obsessed with it.
- (D) In the beginning of the story the narrator is indifferent with

and filled them with vibrant sound, and light, and turmoil.

Summer passed and winter came. Green grass gave place to white snow. The herds descended from the mountains to the valleys and the hollows. And in the town they kept saying that the Wonder Horse was roaming through this or that secluded area. I inquired everywhere for his whereabouts. Every day he became for me more of an ideal, more of an idol, more of a mystery.

It was Sunday. The sun had barely risen above the snowy mountains. My breath was a white cloud. My horse was trembling with cold and fear like me. I left without going to mass. Without the usual bread and sardines in my saddlebags. I had slept badly but had kept the vigil well. I was going in search of the white light that galloped through my dreams.

On leaving the town for open country, the roads disappear. There are no tracks, human or animal. Only a silence, deep, white, and sparkling. My horse breaks trail with his chest and leaves an unending wake, an open rift, in the white sea. My trained, concentrated gaze covers the landscape from horizon to horizon, searching for the noble silhouette of the talismanic horse.

It must have been midday. I don't know. Time had lost its meaning. I found him! On a slope stained with sunlight. We saw one another at the same time. Together, we turned to stone. Motionless, absorbed, and panting, I gazed at his beauty, his pride, his nobility. As still as

capturing the wild horse, but over the course of the text, he constantly daydreams about riding it.

6. Claim 1, Target 6 Text Structures and Features, **Standard:** RL.6.5

What does the author accomplish by using symbolism in the text?

- Ⓐ Symbolism allows the author to illustrate that horses are a wonder to mankind.
- Ⓑ Symbolism allows the author to illustrate the vision of freedom that the narrator wishes he had.
- Ⓒ Symbolism allows the author to illustrate the relationship between man and animals.
- Ⓓ Symbolism allows the author to illustrate the struggle between a mysterious white horse and the narrator.

7. Claim 1, Target 7: Language Usage, **Standard:** RL.6.4

Read the sentence.

“I had slept badly but kept the **vigil** well.”

What does the author create by using the word **vigil**?

- Ⓐ Describes the narrator's efforts to watch for the horse.
- Ⓑ Describes a period of time that occur during the day.
- Ⓒ Describes the narrator's relationship between the horse and the man.

<p>sculptured marble, he allowed himself to be admired.</p> <p>A sudden, violent scream breaks the silence. A glove hurled into my face. A challenge and a mandate. Then something surprising happens. The horse that in summer takes his stand between any threat and his herd, swinging back and forth from left to right, now plunges into the snow. Stronger than they, he is breaking trail for his mares. They follow him. His flight is slow in order to conserve his strength.</p> <p>I follow. Slowly. Quivering. Thinking about his intelligence. Admiring his courage. Understanding his courtesy. The afternoon advances. My horse is taking it easy.</p> <p>One by one the mares become weary. One by one, they drop out of the trail. Alone! He and I. My inner ferment bubbles to my lip. I speak to him. He listens and is quiet.</p> <p>He still opens the way, and I follow in the path he leaves me. Behind us a long, deep trench crosses the white plain. My horse, which has eaten grain and good hay, is still strong. Under-nourished as the Wonder Horse is, his strength is waning. But he keeps on because that is the way he is. He does not know how to surrender.</p> <p>I now see black stains over his body. Sweat and the wet snow have revealed the black skin beneath the white hair. Snorting breath, turned to steam, tears the air. White spume above white snow. Sweat, spume, and steam. Uneasiness.</p> <p>I felt like an executioner. But there was no turning back. The distance between us was</p>	<p>Ⓓ Describes a simple visualization from the narrator.</p> <p>8. Claim 2, Target 9: Edit Clarify (conventions), Standard: L.6.1 Read the sentence and the question that follows. Although the children were quiet in the library, the librarian turned their names in to the principal. Choose the sentence that corrects the two grammar usage errors.</p> <p>Ⓐ Although the children were quiet in the library, the librarian turned they're names in to the principal.</p> <p>Ⓑ Although the children were quiet in the library, the librarian turned their names in to the principal.</p> <p>Ⓒ Although the children were quiet in the library, the librarian turned they're names in to the principle.</p> <p>Ⓓ Although the children were quiet in the library, the librarian turned their names in to the principal.</p> <p>9. Claim 2, Target 9: Edit Clarify (conventions), Standard: L.6.2 Choose the sentence that does not have any errors in grammar usage.</p> <p>Ⓐ On the camping trip, I lost my shoes, flashlight, and map.</p> <p>Ⓑ Yesterday, I take my sister to the park.</p>
--	---

bubbled up inside me almost destroyed the impression I wanted to create.

That night I slept little, and when I slept, I did not know that I was asleep. For dreaming is the same when one really dreams, asleep or awake. I was up at dawn. I had to go to see my Wonder Horse. As soon as it was light, I went out into the cold to look for him.

The pasture was large. It contained grove of trees and a small gully. The Wonder Horse was not visible anywhere, but I was not worried. I walked slowly, my head full of the events of yesterday and my plans for the futures.

Suddenly I realized that I had walked a long way. I quicken my steps. I look apprehensively around me. I begin to be afraid. Without knowing it, I begin to run. Faster and faster.

He is not there. The Wonder Horse has escaped. I search every corner where he could be hidden. I follow his tracks. I see that during the night he walked incessantly, sniffing, searching for a way out. He did not find one. He made one for himself.

I followed the track that led straight to the fence. And I saw that the trail did not stop but continued on the other side. It was a barbed-wire fence. There was white hair on the wire. There was blood on the barbs. There were red stains on the snow and little red drops in the hoof prints on the other side of the fence.

I stopped there. I did not go any farther. The rays of the morning sun on my face. Eyes clouded and yet filled with light. Childish tears on the cheeks of a man. A cry stifled in my throat. Slow, silent sobs.

Standing there, I forgot myself and the world and time. I cannot explain it, but my sorrow was mixed with pleasure. I was weeping with happiness. No matter how much it hurt me, I was rejoicing over the flight and the freedom of the Wonder Horse, the dimensions of his indomitable spirit. Now he would always be fantasy, freedom, and excitement. The Wonder Horse was transcendent. He had enriched my life forever.

My father found me there. He came close without a word and laid his arm across my shoulders. We stood looking at the white trench with its flecks of red that led into the rising sun.

Pronouns

1. Choose the sentence with the correct pronoun.

- A. Jim and I volunteered to clean the art room, and before we began, Mrs. Smith divided the work between him and me.
- B. Jim and I volunteered to clean the art room, and before we began, Mrs. Smith divided the work between he and I.

L.6.1.A

Pronouns

2. Which is the correct way to write the underlined portion of the sentence below?

We ourselves enjoy ice skating and snowshoeing.

- A. themselves
- B. myself
- C. yourselves
- D. Correct as is.

L.6.1.B

Pronouns

3. Which sentence is written correctly?

- A. Him and they went swimming.
- B. Him and them went swimming.
- C. He and them went swimming.
- D. He and they went swimming.

L.6.1.C

Pronouns

4. Which choice shows how to correct the vague pronoun used below?

The people at the park saw that a storm was coming. This caused them to look for cover.

- A. The people at the park saw that a storm was coming, and it caused them to look for cover.
- B. The people at the park saw that a storm was coming, and this caused them to look for cover.
- C. The people at the park saw that a storm was coming, which caused them to look for cover.
- D. The people at the park saw that a storm was coming, and this observation caused them to look for cover.

L.6.1.D

Language variations

5. What is the **best** way to write the sentence below so that it uses standard English?

I ain't sure whether he is comin' today or tomorrow.

- A. I am not sure whether he is comin' today or tomorrow.
- B. I ain't sure certain he is coming today or tomorrow.
- C. I am not sure whether he is coming today or tomorrow.
- D. Leave as is.

L.6.1.E



Assignment

Write a Story Using a Complete Writing Process

Topic: YouTube Star

Directions for Beginning:

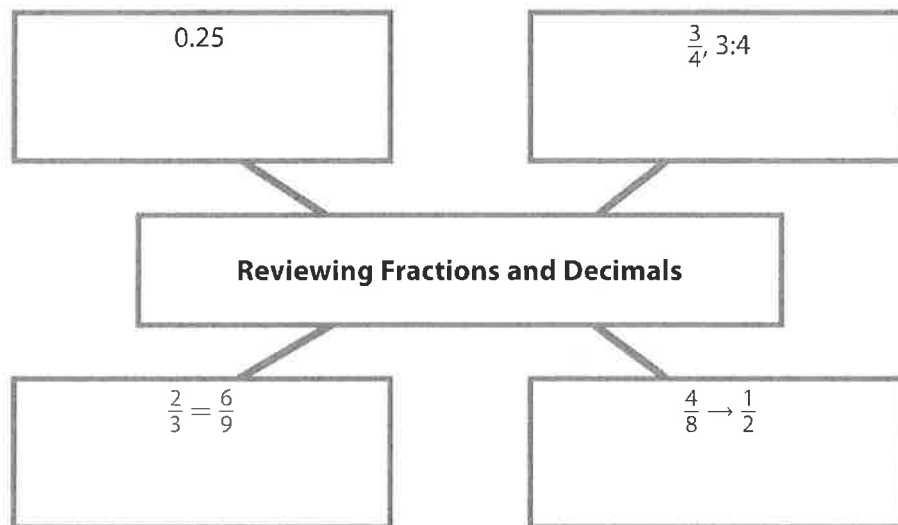
You will now review several sources. You may review the sources as often as you like.

Sources for the Task:

Reading Start-Up

Visualize Vocabulary

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



Vocabulary

Review Words

- ✓ decimal (*decimal*)
- ✓ equivalent fractions (*fracciones equivalentes*)
 - denominator (*denominador*)
- ✓ fraction (*fracción*)
 - mixed number (*número mixto*)
 - numerator (*numerador*)
- ✓ ratio (*razón*)
- ✓ simplest form (*mínima expresión*)

Preview Words

- equivalent decimals (*decimales equivalentes*)
- model (*modelo*)
- percent (*porcentaje*)
- proportional reasoning (*razonamiento proporcional*)

Understand Vocabulary

Match the term on the left to the correct expression on the right.

- | | |
|------------------------|---|
| 1. percent | A. A ratio that compares a number to 100. |
| 2. model | B. Decimals that name the same amount. |
| 3. equivalent decimals | C. Something that represents another thing. |

Active Reading

Pyramid Before beginning the module, create a pyramid to help you organize what you learn. Label one side "Decimals," one side "Fractions," and the other side "Percents." As you study the module, write important vocabulary and other notes on the appropriate side.

LESSON 8.3 Solving Percent Problems

CA CC 6.RP.3c

Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means $\frac{30}{100}$ times the quantity); solve problems involving finding the whole, given a part and the percent. Also 6.RP.3



ESSENTIAL QUESTION

How do you use percents to solve problems?

EXPLORE ACTIVITY



CA CC 6.RP.3

Modeling a Percent Problem

You can use a model to solve a percent problem.

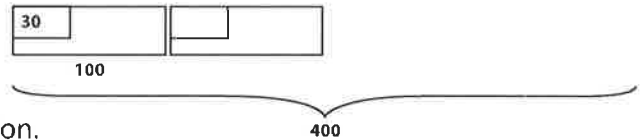
A sports store received a shipment of 400 baseball gloves. 30% were left-handed. How many left-handed gloves were in the shipment?



A Use the diagram to solve this problem.

30% means 30 out of _____.

There were _____ left-handed gloves for every 100 baseball gloves.

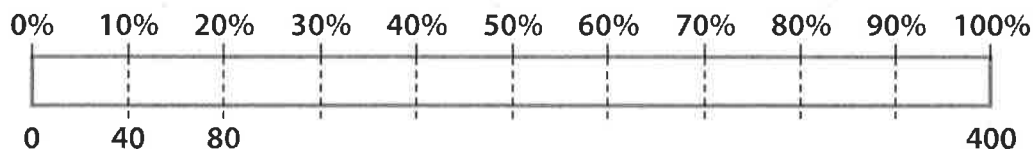


Complete the diagram to model this situation.

B Describe how the diagram models the shipment of gloves.

C Explain how you can use the diagram to find the total number of left-handed gloves in the shipment.

D Use a bar model to solve this problem. The bar represents 100%, or the entire shipment of 400 gloves. The bar is divided into 10 equal parts. Complete the labels along the bottom of the bar.



Reflect

- 1. Justify Reasoning** How did you determine the labels along the bottom of the bar model in Step D?

- 2. Communicate Mathematical Ideas** How can you use the bar model to find the number of left-handed gloves?



Finding a Percent of a Number

A percent is equivalent to the ratio of a part to a whole. To find a percent of a number, you can write a ratio to represent the percent, and find an equivalent ratio that compares the part to the whole.

The word "of" indicates multiplication.

To find 30% of 400, you can use:

Proportional Reasoning

$$\begin{array}{l} \begin{array}{c} \nearrow 4 \\ \frac{30}{100} = \frac{?}{400} \leftarrow \text{part} \\ \leftarrow \text{whole} \\ \searrow 4 \\ = \frac{120}{400} \end{array} \end{array}$$

Multiplication

$$\begin{aligned} 30\% \text{ of } 400 &= \frac{30}{100} \text{ of } 400 \\ &= \frac{30}{100} \times 400 \\ &= 120 \end{aligned}$$

EXAMPLE 1

CA CC 6.RP.3c

A Use proportional reasoning to find 28% of 25.

Math Talk

Mathematical Practices

Could you also use the proportion $\frac{28}{100} = \frac{?}{25}$ to find 28% of 25? Explain.

STEP 1

Write a proportion comparing the percent to the ratio of part to whole.

$$\frac{?}{25} = \frac{28}{100}$$

Notice that 25 is a factor of 100.

STEP 2

Find the multiplication factor.

$$\begin{array}{l} \text{part} \rightarrow \frac{?}{25} = \frac{28}{100} \\ \text{whole} \rightarrow \end{array}$$

Since $25 \cdot 4 = 100$, find what number times 4 equals 28.

STEP 3

Find the numerator.

$$\frac{7}{25} = \frac{28}{100}$$

Since $4 \cdot 7 = 28$, 28% of 25 = 7.

28% of 25 is 7.

B Multiply by a fraction to find 35% of 60.

STEP 1 Write the percent as a fraction.

$$35\% \text{ of } 60 = \frac{35}{100} \text{ of } 60$$

STEP 2 Multiply.

$$\begin{aligned} \frac{35}{100} \text{ of } 60 &= \frac{35}{100} \cdot 60 \\ &= \frac{2,100}{100} \\ &= 21 \quad \text{Simplify.} \end{aligned}$$

○ 35% of 60 is 21.

C Multiply by a decimal to find 5% of 180.

STEP 1 Write the percent as a decimal.

$$5\% = \frac{5}{100} = 0.05$$

STEP 2 Multiply.

$$180 \cdot 0.05 = 9$$

○ 5% of 180 is 9.

Reflect

3. Analyze Relationships In **B**, the percent is 35%. What is the part and what is the whole?

4. Communicate Mathematical Ideas Explain how to use proportional reasoning to find 35% of 600.

YOUR TURN

Find the percent of each number.

- 5.** 38% of 50 _____ **6.** 27% of 300 _____ **7.** 60% of 75 _____





Math On the Spot

my.hrw.com

Finding a Percent Given a Part and a Whole

You can use proportional reasoning to solve problems in which you need to find a percent.

EXAMPLE 2



CA CC 6.RP.3

The school principal spent \$2,000 to buy some new computer equipment. Of this money, \$120 was used to buy some new keyboards. What percent of the money was spent on keyboards?

STEP 1 Since you want to know the part of the money spent on keyboards, compare the part to the whole.

$$\begin{array}{l} \text{part} \rightarrow \$120 \\ \text{whole} \rightarrow \$2,000 \end{array}$$

STEP 2 Write a proportion comparing the percent to the ratio of part to whole.

$$\begin{array}{l} \text{part} \rightarrow ? \\ \text{whole} \rightarrow 100 \end{array} = \frac{120}{2,000} \begin{array}{l} \leftarrow \text{part} \\ \leftarrow \text{whole} \end{array}$$

STEP 3 Find the multiplication factor.

$$\frac{?}{100} = \frac{120}{2,000}$$

Since $100 \cdot 20 = 2,000$, find what number times 20 equals 120.

STEP 4 Find the numerator.

$$\frac{6}{100} = \frac{120}{2,000} \quad \text{Since } 20 \cdot 6 = 120, \text{ the percent is } 6\%.$$

The principal spent 6% of the money on keyboards.

Reflect

8. **Communicate Mathematical Ideas** Write 57% as a ratio. Which part of the ratio represents the part and which part represents the whole? Explain.

YOUR TURN



9. Out of the 25 students in Mrs. Green's class, 19 have a pet. What percent of the students in Mrs. Green's class have a pet? _____



Personal Math Trainer

Online Practice and Help

my.hrw.com

Finding a Whole Given a Part and a Percent

You can use proportional reasoning to solve problems in which you know a part and a percent and need to find the whole.



Math On the Spot

my.hrw.com

EXAMPLE 3



6.RP.3c

Twelve of the students in the school choir like to sing solos. These 12 students make up 24% of the choir. How many students are in the choir?

STEP 1 Since you want to know the total number of students in the choir, compare the part to the whole.

$$\begin{array}{l} \text{part} \rightarrow 12 \\ \text{whole} \rightarrow ? \end{array}$$

STEP 2 Write a proportion comparing the percent to the ratio of part to whole.

$$\begin{array}{l} \text{part} \rightarrow 12 \\ \text{whole} \rightarrow ? \end{array} = \frac{24}{100} \quad \begin{array}{l} \leftarrow \text{part} \\ \leftarrow \text{whole} \end{array}$$

You know that 12 students represent 24%.

STEP 3 Find the multiplication factor.

$$\frac{12}{?} = \frac{24}{100}$$

Since $12 \cdot 2 = 24$, find what number times 2 is equal to 100.

STEP 4 Find the denominator.

$$\frac{12}{50} = \frac{24}{100}$$

Since $50 \cdot 2 = 100$, the denominator is 50.

There are 50 students in the choir.



Math Talk

Mathematical Practices

Suppose 10 more students join the choir. None of them are soloists. What percent are soloists now?

Reflect

- 10. Check for Reasonableness** In Example 3, 24% is close to 25%. How could you use this fact to check that 50 is a reasonable number for the total number of students in the choir?

YOUR TURN

11. 6 is 30% of _____.

12. 15% of _____ is 75.



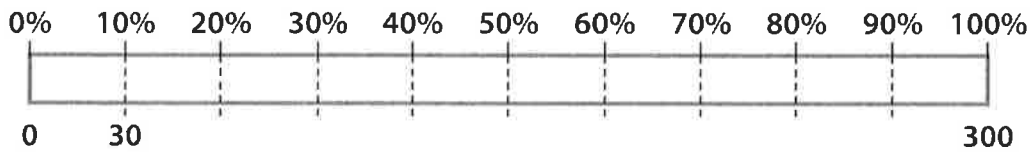
Personal Math Trainer

Online Practice and Help

my.hrw.com

Guided Practice

1. A store has 300 televisions on order, and 80% are high definition. How many televisions on order are high definition? Use the bar model and complete the bottom of the bar. (*Explore Activity*)



2. Use proportional reasoning to find 65% of 200. (*Example 1*)

$$\begin{array}{l} \text{part} \rightarrow \frac{\square}{100} = \frac{?}{\square} \leftarrow \text{part} \\ \text{whole} \rightarrow \end{array}$$

65% of 200 is _____.

3. Use multiplication to find 5% of 180. (*Example 1*)

$$\begin{array}{l} \frac{5}{100} \text{ of } 180 = \frac{5}{100} \square 180 \\ = \frac{\square}{100} = \square \end{array}$$

5% of 180 is _____.

4. Alana spent \$21 of her \$300 paycheck on a gift. What percent of her paycheck was spent on the gift? (*Example 2*)

$$\begin{array}{l} \text{part} \rightarrow \frac{?}{\square} = \frac{\$ \square}{\$ \square} \leftarrow \text{part} \\ \text{whole} \rightarrow \end{array}$$

Alana spent _____ of her paycheck on the gift.

5. At Pizza Pi, 9% of the pizzas made last week had broccoli on them. If 27 pizzas had broccoli, how many pizzas in all were made last week? (*Example 3*)

$$\begin{array}{l} \text{part} \rightarrow \frac{\square}{100} = \frac{27}{?} \leftarrow \text{part} \\ \text{whole} \rightarrow \end{array}$$

There were _____ pizzas made last week.



ESSENTIAL QUESTION CHECK-IN

6. How can you use proportional reasoning to solve problems involving percent?

6. Which is the correct way to add information to the underlined portion of the sentence?

Ralph is coming with me to the concert and puppet show.

- A. Ralph, my older cousin, is coming
- B. Ralph, my older cousin is coming
- C. Ralph my older cousin, is coming
- D. Ralph my older cousin is coming

L.6.2.A

7. Read this sentence.

There is evidence that suggests that sequoias were found in many parts of the Northern Hemisphere during ancient times.

What is the best way to spell the underlined word?

- A. segests
- B. sugests
- C. seggests
- D. Leave as is.

L.6.2.B

8. What is the BEST way to revise this sentence?

The coast of South Carolina and Georgia is rich in history and it is rich in culture, too.

- A. The coast of South Carolina and Georgia is rich in history and culture.
- B. The history is rich in Georgia, and the culture is rich in South Carolina.
- C. Both rich in culture and history, people love living on the coast of South Carolina and Georgia.
- D. South Carolina and Georgia is rich in culture and history.

L.6.3.A

9. Which of the following sentences does not fit in the paragraph below and should be removed?

(25) The celebration of the bridge opening was truly exciting. (26) The day before the bridge opened, around 200,000 people walked or roller skated across it. (27) On the actual opening day, a parade went across the bridge. (28) The mayor, Joseph Strauss, and beauty queens were in the parade. (29) At noon on opening day, President Franklin D. Roosevelt signaled for the start of traffic on the bridge. (30) President Roosevelt was the 32nd president of the United States.

- A. sentence 26
- B. sentence 27
- C. sentence 28
- D. sentence 30

L.6.3.B

+ Source #2

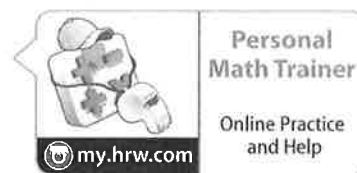
YouTube Stars' Income

By Unknown

	PewDiePie	Michelle Phan	EvanTubeHD
Famous for:	telling jokes	putting on makeup	reviewing toys
Total revenue:	approximately \$10.5 million per year	approximately \$378,000 per year	approximately \$300,000- \$2.8 million per year
YouTube's fee:	@\$5.75 million per year	@\$207,000 per year	@\$134,000- 1.32 million per year
Taxes:	@\$1.75 million per year	@\$130,000 per year	vary

8.3 Independent Practice

CA CC 6.RP.3, 6.RP.3c



Find the percent of each number.

7. 64% of 75 tiles

8. 20% of 70 plants

9. 32% of 25 pages

10. 85% of 40 e-mails

11. 72% of 350 friends

12. 5% of 220 files

Complete each sentence.

13. 4 students is _____ % of 20 students.

14. 2 doctors is _____ % of 25 doctors.

15. _____ % of 50 shirts is 35 shirts.

16. _____ % of 200 miles is 150 miles.

17. 4% of _____ days is 56 days.

18. 60 minutes is 20% of _____ minutes.

19. 80% of _____ games is 32 games.

20. 360 kilometers is 24% of _____ kilometers.

21. 75% of _____ peaches is 15 peaches.

22. 9 stores is 3% of _____ stores.

23. At a shelter, 15% of the dogs are puppies. There are 60 dogs at the shelter.

How many are puppies? _____

24. Carl has 200 songs on his MP3 player. Of these songs, 24 are country songs. What percent of

Carl's songs are country songs? _____

25. **Consumer Math** The sales tax in the town where Amanda lives is 7%. Amanda paid \$35 in sales tax on a new stereo. What was

the price of the stereo? _____

26. **Financial Literacy** Ashton is saving money to buy a new bike. He needs \$120 but has only saved 60% so far. How much more money

does he need to buy the scooter? _____

27. **Consumer Math** Monica paid sales tax of \$1.50 when she bought a new bike helmet. If the sales tax rate was 5%, how much did the store charge

for the helmet before tax? _____

28. Use the circle graph to determine how many hours per day Becky spends on each activity.

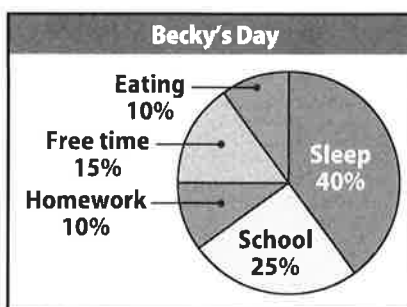
School: _____ hours

Eating: _____ hours

Sleep: _____ hours

Homework: _____ hours

Free time: _____ hours



Lexile	
Grade	Meets
5	830-1010
6	925-1070

Source Title: Diving Under the Sea **Section 1 Lexile:** 980

WASHINGTON, D.C. (Achieve3000, January 29, 2007). Have you ever heard of the elephant seal, the viperfish, or the giant squid? There are millions of animal species in the world's oceans, and some of them are not all that well known.

Imagine that you want to study each of these species. For each species, you will go a little bit deeper into the ocean. You will start in the sunlit zone, the area near the surface, where a great deal of sunlight gets through. On the second dive, you will go into the twilight zone, where a small amount of sunlight gets through. Finally, you will dive down into the midnight zone, where there is no sunlight. Here is what you find in each zone.

The Elephant Seal

In the sunlit zone, you will look for the elephant seal, a mammal that dives into the ocean to hunt its prey. The elephant seal lives off the coasts of the western U.S., Mexico, New Zealand, South Africa, Argentina, and several islands. You have decided to conduct your dive off the coast of southern California.

In the sunlit zone, you can see many living things. Since there is sunlight, there are plenty of plants, as well as a large percentage of the ocean's animals. In this warm-water region, you can see plankton, jellyfish, sea turtles, and mackerel. You can even spot a few toothy barracuda using their sharp eyesight to find schools of fish to hunt.

Target 9 Central Ideas

1. Which sentence is the best summary of why you see many living things in the sunlit zone?

- A In this warm water region, you can see plankton, jellyfish, sea turtles, and mackerel.
- B Since there is sunlight, there are plenty of plants as well as a large percentage of the ocean's animals.
- C You can spot a few toothy barracuda looking for fish.
- D Elephant seals spend 90% of their lives in the water hunting for prey.

Target 8 Key Details

2. Which detail from the passage best supports why you need to use a remote, underwater camera to look for viperfish?

- A The camera reveals some fascinating creatures.
- B They blend in with the dark water.
- C It is not safe for a human to dive so far down.
- D Many of the animals are thin so they can hide from predators.

Elephant seals live on land when they are breeding, but they spend up to 90 percent of their lives in the water, hunting for prey. These great divers can go to depths of nearly 5,000 feet. They have the ability to remain underwater for over 80 minutes. Elephant seals usually hunt for skates, rays, squid, and octopi, creatures that live about 1,000 to 2,000 feet below the surface.

You're lucky enough to spot an elephant seal as it is heading back up to the water's surface. You can tell that it is a male because it is about 16 feet long and must weigh over 5,000 pounds. A female would be about one-third of that size. Like other seals, the elephant seal has no external ear flaps, but his size sets him apart. As he passes by, he uses his front flippers to steer and his back flippers to propel himself along. His thick layer of blubber protects him from the cold, deeper waters.

You spot a great white shark. Scientists believe that this animal sometimes preys on elephant seals. Knowing that great whites can be dangerous, you don't stick around to find out whether this is true!

The Viperfish

Next, you're going to look for a fish that shares its name with a poisonous snake. The viperfish lives in tropical and temperate waters all over the world. This exciting mission gives you the chance to see one of the fiercest-looking creatures in the ocean. Viperfish have fang-like teeth that are so large they do not allow the mouth to close. Scientists believe that the viperfish uses its teeth to stab its victims. The viperfish has an organ on its dorsal fin that gives off light. It flashes the organ on and off in the dark water to lure its prey to it. If the prey is very large, the viperfish opens its hinged jaws to swallow it. Viperfish mostly eat crustaceans and small fish.

Viperfish live in the twilight zone of the ocean, where there is very little light. During the day, these animals live at depths of 1,600 to 8,000 feet below the surface. At night, they travel to less than 1,900 feet below the surface, where they catch their food.

It is not safe for a human to dive so far down, even with scuba equipment. Therefore, you will use a remote, underwater camera to look for viperfish. Your

Target 11 Reasoning and Evaluation

3. Which sentence does NOT support why the author calls viperfish the fiercest-looking creatures in the ocean?

- (A) Viperfish mostly eat crustaceans and small fish.
- (B) They have green, glowing eyes.
- (C) They have fang like teeth.
- (D) They have an organ on their dorsal fin that gives off light.

Target 10 Word Meaning

4. A synonym is a word that means the same or nearly the same as another word. What is a synonym for the word external as used in the following sentence from the passage?

Like other seals, the elephant seal has no external ear flaps.

- (A) inside
- (B) interior
- (C) outside
- (D) surrounding

camera requires lighting equipment so that you can see through the deep waters. You are concerned that the lights might scare away the vipers, so you try attaching bait to the equipment. Once in place, the camera reveals some fascinating creatures. Many of the animals are thin so that they can hide from predators, or they are red or black to help them blend in with the dark water. Some of them have large eyes that help them spot prey in the dark. You can see an octopus using the suction cups on its eight arms to cling to the ocean floor.

Although you see many unusual species at this depth, you do not spot a viperfish. Later, you learn that few people have ever spotted a viperfish. In fact, no one has ever photographed this species in the ocean.

Target 12 Analysis within/across Texts

5. How does the author's use of imagination add to the development of the passage?

- (A) It engages the reader by simulating a journey through the different zones.
- (B) It shows readers that the author has taken an ocean journey in the past.
- (C) It helps the reader see how animals feel in the ocean.
- (D) It contributes to the humorous tone of the passage.

Target 13 Text Structures and Features

6. Which best describes why the author organized the passage into the three zones: sunlit, twilight, and midnight?

- (A) to give the ocean cool nicknames
- (B) to discuss all the creatures that live in each zone
- (C) to discuss all the plants that grow in each zone
- (D) to highlight the depth and complexity of the ocean

Target 14 Language Usage

7. Read the sentence.

You're lucky enough to spot an elephant seal as it is heading back up to the water's surface.

What is the author suggesting by using the underlined phrase?

- A That you have the luck of the Irish
- B That seeing an elephant seal has never occurred before
- C That the elephant seal will be at the water's surface soon
- D That seeing an elephant seal is a rare event

Claim 2 Target 9 Edit/Clarify (Conventions)

8. Choose the sentence with TWO spelling errors.

- A The students were excited to receive new laptops.
- B They left there jackets over their on the floor.
- C I need to go to the grocery store after work.
- D The library is behind the construction sight.

10. Identify the correct meaning of the word conduct in the sentence below.

After thanking the students for their polite conduct, the teacher led them back into the classroom.

- A. to escort
- B. behavior
- C. management
- D. to contribute

L.6.4.A

11. The word antidote is a noun. What does its affix suggest about the meaning of antidote?

- A. An antidote is the study of something.
- B. An antidote is a quality of something.
- C. An antidote carries something.
- D. An antidote works against something.

L.6.4.B

12. Read this dictionary entry:

per-ceive [per-seev] *verb*
 1. to know or be aware of;
 2. to recognize or understand

Which is true about the correct pronunciation of "perceive"?

- A. The first "e" is silent.
- B. The "c" is pronounced like an "s."
- C. The first part of the word is stressed.
- D. The final letter of the word is stressed.

L.6.4.C

13. A student inferred that the word advocate means supporter. Which option **best** verifies the student's initial understanding of the meaning of advocate?

- A. advocate: *verb* to recommend; to give a speech or prepare a piece of writing in favor of something.
- B. advocate: *noun* one who acts on behalf of someone else.
- C. advocate: *noun* one who argues for a client in a court of law.
- D. advocate: *noun* one who writes or speaks in favor of a person or a cause.

L.6.4.D

14. Which is the BEST explanation of the figurative meaning of the underlined phrase in the sentence below?

She envisioned the lake that lapped the foundation of Gramp's house and the feet of Gramp's worn dock.

- A. The phrase shows that the dock is dangerously worn and may collapse.
- B. The phrase refers to people's habit of dangling their feet over the dockside.
- C. The phrase indicates the lower end or bottom of the dock.
- D. The phrase depicts the dock as a human being with worn feet

L.6.5.A

The Assignment:

The Story Club in your school is creating a website of stories about people with interesting jobs. Your website will be read by parents, teachers, and the other students in your school. You chose to write a story that is several paragraphs long about what happened when you worked on YouTube as a master of amazing challenges.

Write a story about what happened when you worked on YouTube as a master of amazing challenges.

Writers often do research to add realistic details to the setting, characters, and plot in their stories. You may use information from the sources you have read to write your story. Make sure your story includes a setting, gives information about the characters, and describes what happens. Remember to use words that describe and don't just tell. Your story should have a clear beginning, middle, and end.

REMEMBER: A well-written story

- has a clear plot and clear order of events
- is well-organized and has a point of view
- uses details from the sources to support your story
- uses clear language
- follows rules of writing (spelling, punctuation, and grammar usage)

Your Response:

Ratios and Proportional Relationships RP.3



Name _____

1. For A-D, Choose Yes or No to indicate whether the percent and the fraction represent the same amount.

A. 12% and $\frac{1}{2}$

Yes No

B. 87.5% and $\frac{7}{8}$

Yes No

C. $\frac{5}{6}$ and 83.33%

Yes No

D. $\frac{4}{9}$ and 83.33%

Yes No

2. The school orchestra has 20 strings, 20 woodwinds, 35 percussionists and 25 brass instruments. Select the portion of the instruments that are percussion. Mark all that apply.

A. $\frac{1}{35}$

B. 350%

C. 3.5

D. 35:100

3. There are 55 hats in a bin and 20% of the hats are blue.

11

20

There are _____ blue hats in the bin.

35

14

4. Circle the option that makes the sentence below true.

$$\begin{array}{c}
 > \\
 45\% \text{ of } 60 = 90\% \text{ of } 70 \\
 <
 \end{array}$$

5. Lillian wants to put a variety of muffins in a display case. The case is large enough to hold 60 muffins. Complete the table below.

Type of Muffin	Percent of Maximum Number	Number of Muffins in Case
Chocolate Chip	40%	
Banana	10%	
Pumpkin	50%	

6. In a school with 220 students, 80% are males. Select **all** expressions that can be used to find the total number of male students.

- A. $\frac{8}{10} \cdot 220$
- B. $\frac{800}{100} \cdot 220$
- C. $\frac{0.80}{100} \cdot 220$

7. Select **all** expressions that can be used to find 45% of 280.

- A. $\frac{4.5}{10} \cdot 280$
- B. $\frac{0.45}{100} \cdot 280$
- C. $\frac{450}{100} \cdot 280$

Lexile	
Grade	Meets
5	830-1010
6	925-1070

Source Title: Diving Under the Sea **Section 2 Lexile:** 980

The Giant Squid

The last part of your mission takes you to the darkest part of the ocean—the midnight zone. The midnight zone is extremely dark and cold. Water temperatures hover just above the freezing mark. Since this area is so brutal, it can support only one percent of ocean species. The giant squid is one of them.

Giant squids are difficult to find. In fact, no one ever captured a photograph of a live giant squid until 2004. Until then, the animal lived in the imaginations of storytellers. Mariners reported seeing 59-foot sea monsters rising out of the ocean. Scientists now believe that these "monsters" were actually giant squids and that the mariners exaggerated what they had seen. They have found the remains of giant squids inside the stomachs of their predators, sperm whales. Based on estimates, none was longer than 33 feet long.

Giant squids live in the northern and southern Atlantic and Pacific Oceans. You have chosen to do your search in the Pacific, near Japan. This time, you dive into the ocean in a submarine, which takes you 3,000 feet below the surface. The species you see have strange characteristics that help them adapt to the darkness. Some do not even have eyes. There are brittle stars. These animals have long tentacles that help them move through the mud on the ocean floor. There are vampire squid, which look soft, like jellyfish, but have tentacles and huge eyes.

Target 9 Central Ideas

1. Reread the second paragraph of "Diving Under the Sea" Section 2. Which sentence best summarizes the central idea of the paragraph?

- (A) Giant squids are challenging to locate.
- (B) Based on estimates, none was longer than 33-foot long.
- (C) Mariners reported seeing 59-foot sea monsters rising out of the ocean.
- (D) They have found the remains of giant squids inside the stomachs of their predators, sperm whales.

Target 8 Key Details

2. Which evidence from the text best supports the idea that the midnight zone does not get a high amount of sun exposure?

- (A) The midnight zone is extremely dark and cold.
- (B) It is in the Pacific, near Japan.
- (C) The water is extremely warm.
- (D) There are many different types of creatures.

Suddenly, you spot a huge creature with oversized eyes, eight arms, and two tentacles. Its torpedo-shaped body is moving through the water. It is probably going after some sort of animal prey. The water is too dark to see, but scientists have reported that giant squids catch their prey with the suction cups on their tentacles. You are one of a small group of people who have ever seen a live, giant squid. You watch as the squid disappears into the dark, murky waters.

As your submarine surfaces, you make plans for your next ocean mission. You have seen marine animals that are beyond the wildest imagination, and there is so much more to see.

Target 11 Reasoning and Evaluation

3. What inference can be made about author's opinion of the midnight zone?

- (A) It is not worth taking the time to learn about the midnight zone.
- (B) There are many interesting details to learn about the midnight zone.
- (C) The midnight zone is too strange of a place to study.
- (D) The midnight zone is important because it is easy for humans to visit.

Target 10 Word Meaning

4. Read the sentence.

The species you see have strange characteristics that help them adapt to the darkness.

What is the meaning of the word "adapt"?

- (A) to move away from something
- (B) to swim towards something
- (C) to adjust to something
- (D) to tread through something

Target 12 Analysis within/across Texts

5. Read the sentences.

As your submarine surfaces, you make plans for your next ocean mission. You have seen marine animals that are beyond your wildest imagination, and there is so much more to see.

What does the information presented in the text tell the reader about the author's point of view?

- (A) The author is confident that readers would want to do another ocean mission.
- (B) The author believes that ocean missions are too expensive.
- (C) The author does not believe that readers would want to do another ocean mission.
- (D) The author feels that only children should do ocean missions.

Target 13 Text Structures and Features

6. What does the author accomplish by including the heading "The Giant Squid" in the text?

- (A) It shows readers that the giant squid does not really exist.
- (B) It indicates that the giant squid once appeared in a major motion picture.
- (C) It suggests that the giant squid will be the subject of a future article.
- (D) It shows readers that the giant squid is the primary topic of the next section.

Target 14 Language Usage

7. Read the sentence.

Since this area is so brutal, it can support only one percent of ocean species.

Why did the author most likely use the word “brutal”?

- A To emphasize that the midnight zone is extremely angry
- B To remind readers that the midnight zone is extremely cold and dark
- C To show readers how the author feels about the midnight zone
- D To remind readers that the midnight zone is well lit by the sun and warm

Claim 2 Target 9 Edit/Clarify (Conventions)

8. Choose the sentence that is punctuated correctly.

- A You will find three zones in the ocean; the sunlit zone, the twilight zone, and the midnight zone.
- B You will find three zones in the ocean, the sunlit zone, the twilight zone, and the midnight zone.
- C You will find three zones in the ocean: the sunlit zone, the twilight zone, and the midnight zone.
- D You will find three zones in the ocean: the sunlit zone; the twilight zone; and the midnight zone.

15. Read the short passage below.

Sarah Winnemucca was a woman who tried her best to improve the lives of Native Americans. The exact date of her birth is not known. It is believed, however, that she was born somewhere around 1844 in Humboldt Lake, Nevada.

Which word from the excerpt BEST completes the following sentence?

Incorrect is to mistaken as _____ is to accurate.

- A. improve
- B. exact
- C. believed
- D. around

L.6.5.B

16. Read the sentence below.

By no means is it dramatic, but it is noticeable.

Which word is the closest in meaning to the underlined word?

- A. thrilling
- B. striking
- C. theatrical
- D. expressive

L.6.5.C

17. Which of the following sentences shows someone being **reluctant**?

- A. Janelle doesn't want to be the first to jump off the diving board.
- B. Taylor climbs a mountain but gets killed by a bear.
- C. Hugh doesn't feel like he's equal to Sonny.
- D. Mr. Tiger Woods sure is good at golf.

L.6.6*



GETTING READY FOR

Displaying Analyzing, and Summarizing Data

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 6.SP.5C

Summarize numerical data sets in relation to their context, such as by giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered.

What It Means to You

You will use measures of center to describe a data set.

EXAMPLE 6.SP.5C

Several students' scores on a history test are shown. Find the mean score and the median score. Which measure better describes the typical score for these students? Explain.

History Test Scores						
73	48	88	90	90	81	83

$$\text{Mean: } \frac{73 + 48 + 88 + 90 + 90 + 81 + 83}{7} = \frac{553}{7} = 79$$

To find the median, write the data values in order from least to greatest and find the middle value.

Median: 48 73 81 **83** 88 90 90

The median better describes the typical score.
The mean is affected by the low score of 48.

CA CC 6.SP.4

Display numerical data in plots on a number line, including dot plots, histograms, and box plots.

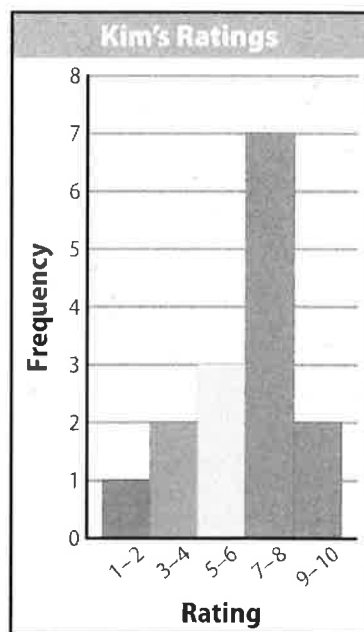
What It Means to You

You will interpret the data from a dot plot, histogram, or box plot.

EXAMPLE 6.SP.4

Kim has started rating each movie she sees using a scale of 1 to 10 on an online site. She made a histogram that shows how she rated the movies. What does the shape of the distribution tell you about the movies Kim has rated?

Of the 15 movies that Kim rated, she rated almost half a 7 or an 8 and did not generally give extreme ratings.



Visit my.hrw.com to see all CA Common Core Standards explained.

my.hrw.com

Reading Start-Up

Visualize Vocabulary

Use the review words to complete the chart.

Introduction to Statistics		
Definition	Example	Review word
A group of facts	The grades of all of the students in a school	
A tool used to gather information from individuals	A questionnaire given to all students to find the number of hours each student spends studying in 1 week	
A value that summarizes a set of unequal values, found by addition and division	Results of the survey show that students typically spend 5 hours a week studying	

Understand Vocabulary

Complete the sentences using the checked preview words.

1. The average of a data set is the _____.
2. The _____ is the middle value of a data set.
3. The number or category that occurs most frequently in a data set is the _____.

Vocabulary

Review Words

average (*promedio*)
data (*datos*)
survey (*encuesta*)

Preview Words

box plot (*diagrama de caja*)
categorical data (*datos categóricos*)
dot plot (*diagrama de puntos*)
histogram (*histograma*)
interquartile range (*rango entre cuartiles*)
lower quartile (*cuartil inferior*)
✓ mean (*media*)
mean absolute deviation (MAD) (*desviación absoluta media, (DAM)*)
✓ median (*mediana*)
measure of center (*medida central*)
measure of spread (*medida de dispersión*)
✓ mode (*moda*)
range (*rango*)
statistical question (*pregunta estadística*)
upper quartile (*cuartil superior*)

Active Reading

Layered Book Before beginning the module, create a layered book to help you learn the concepts in this module. Label each flap with lesson titles from this module. As you study each lesson, write important ideas, such as vocabulary and formulas under the appropriate flap. Refer to your finished layered book as you work on exercises from this module.



16.1 Measures of Center

Summarize numerical data sets in relation to their context. Also 6.SP.3, 6.SP.5a, 6.SP.5b, 6.SP.5c, 6.SP.5d



ESSENTIAL QUESTION

How can you use measures of center to describe a data set?

EXPLORE ACTIVITY 1



Finding the Mean

A **measure of center** is a single number used to describe a set of numeric data. A measure of center describes a typical value from the data set.

One measure of center is the *mean*. The **mean**, or average, of a data set is the sum of the data values divided by the number of data values in the set.

Tami surveyed five of her friends to find out how many brothers and sisters they have. Her results are shown in the table.

Number of Siblings				
Amy	Ben	Cal	Don	Eva
2	3	1	1	3

A Model each person's response as a group of counters.

Amy	Ben	Cal	Don	Eva
●	●	●	●	●
●	●			●
	●			●

B Now rearrange the counters so that each group has the same number of counters.

--	--	--	--	--

Each group now has _____ counter(s). This value is the mean. This model demonstrates how the mean "evens out" the data values.

C Use numbers to calculate the mean.

The sum of the data values is $2 + 3 + \square + \square + \square = \square$.

How many data values are in the set? _____

EXPLORE ACTIVITY 1 (cont'd)

$$\text{Mean} = \frac{\text{sum of data values}}{\text{number of data values}} = \frac{\square}{\square} = \square$$

Math Talk
Mathematical Practices

Suppose you have a data set in which all of the values are 2. What is the mean?

Reflect

- Can the mean be greater than the greatest value in a data set? Why or why not?



Math On the Spot
my.hrw.com

Finding the Median

Another measure of center is the *median*. The **median** represents the middle value of an ordered data set.

EXAMPLE 1



CACC 6.SP.5c, 6.SP.5b

- A** A coach records the distances that some cross-country team members ran last week. Find the median.

Write the data values in order from least to greatest.

3 4 5 5 6 7 7 8 10 10 10

This value is the median.

Equal number of values on either side of the median

The median is 7.

- B** Find the median of these test scores: 87, 90, 77, 83, 99, 94, 93, 90, 85, 83.

Write the data values in order from least to greatest.

77 83 83 85 87 90 90 93 94 99

This data set has two middle values: 87 and 90.

The median is the average of these two values:

$$\text{Median} = \frac{87 + 90}{2} = 88.5$$

The median is 88.5.

Distances Run	
Cara	3 mi
Rob	5 mi
Maria	7 mi
Olivia	10 mi
Zou	10 mi
Chris	4 mi
Amir	7 mi
ris	5 mi
Alex	8 mi
Tara	10 mi
Ned	6 mi

Math Talk
Mathematical Practices

Why does the data set in **A** have one middle value while the data set in **B** has two middle values?

Reflect

2. **What If?** Which units are used for the data in **A**? If the coach had recorded some distances in kilometers and some in miles, can you still find the median of the data? Explain.

YOUR TURN

3. Charlotte recorded the number of minutes she spent exercising in the past ten days: 12, 4, 5, 6, 8, 7, 9, 8, 2, 1. Find the median of the data.



Personal
Math Trainer

Online Practice
and Help

my.hrw.com

EXPLORE ACTIVITY 2



CA.CC 6.SP.5d, 6.SP.5c

Comparing the Mean and the Median

The mean and median of a data set may be equal, very close to each other, or very different from each other. For data sets where the mean and median differ greatly, one likely describes the data set better than the other.



The monthly earnings of several teenagers are \$200, \$320, \$275, \$250, \$750, \$350, and \$310.

- A** Find the mean. Round to the nearest tenth.

$$\frac{\boxed{} + \boxed{} + \boxed{} + \boxed{} + \boxed{} + \boxed{} + \boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}} \approx \boxed{}$$

- B** Write the data values in order from least to greatest and find the median.

- C** The mean and the median differ by about \$_____. Why?

- D** Which measure of center better describes the typical monthly earnings for this group of teenagers—the mean or the median? Explain.

EXPLORE ACTIVITY 2 (cont'd)

Reflect

- 4. Communicate Mathematical Ideas** Luka's final exam scores for this semester are 70, 72, 99, 72, and 69. Find the mean and median. Which is a better description of Luka's typical exam score? Explain your thinking.

Guided Practice

- 1.** Spencer surveyed five of his friends to find out how many pets they have. His results are shown in the table. What is the mean number of pets? (Explore Activity 1)

Number of Pets				
Lara	Cody	Sam	Ella	Maria
3	5	2	4	1

$$\text{Mean} = \frac{\text{sum of data values}}{\text{number of data values}} = \frac{\boxed{}}{\boxed{}} = \boxed{}$$

The mean number of pets is _____

- 2.** The following are the weights, in pounds, of some dogs at a kennel: 36, 45, 29, 39, 51, 49. (Example 1)
- a.** Find the median. _____
- b.** Suppose one of the weights were given in kilograms. Can you still find the median? Explain.

- 3. a.** Find the mean and the median of this data set: 9, 6, 5, 3, 28, 6, 4, 7. (Explore Activity 2)

- b.** Which better describes the data set, the mean or the median? Explain.

ESSENTIAL QUESTION CHECK-IN

- 4.** How can you use measures of center to describe a data set?

Lexile	
Grade	Meets
5	830-1010
6	925-1070

Source Title: Our New Neighbors **Lexile:** N/A

Obtained from School City, 5th Grade

(1) The Fujiwaras moved into the house next door to us. (2) My mom, brother, and I helped them unload boxes from a huge moving van. (3) That's when I got to meet Mei and Makku. (4) They are twins. (5) They are in the third grade. (6) I am in the third grade too. (7) After settling in, Mrs. Fujiwara came over to our house with a cake. (8) She said to my mother, "It is a Japanese tradition to give a cake to say thank you. (9) So thank you for helping us. (10) By the way, we'd love to have you join us for dinner on Saturday. (11) Can you come?"

(12) My mom told her that we would be delighted to come to dinner. (13) She asked Mrs. Fujiwara if there was anything that we could bring. (14) Mrs. Fujiwara said that we should just bring ourselves.

(15) That night, I told my mom how I had learned a lot about Japan in school. (16) I learned that many meals in Japan (for example), include soup and rice, but often people don't use spoons for their soup. (17) Instead they use chopsticks to pick out and eat all the solid things like vegetables or meat. (18)

Target 2 Central Ideas

1. Which sentence best shows the main idea of the passage?

- (A) I learned that many meals in Japan (for example), include soup and rice, but often people don't use spoons for their soup.
- (B) Kimonos are often made from fancy silk fabric.
- (C) I'm glad the Fujiwaras are our neighbors.
- (D) That night, I told my mom how I had learned a lot about Japan in school.

Target 1 Key Details

2. Which sentence from the text best supports the idea that Mrs. Fujiwara is a kind person?

- (A) sentence 1
- (B) sentence 7
- (C) sentence 13
- (D) sentence 22

Then they pick up the bowl and drink the liquid. (19) I also learned that many Japanese people use seaweed in their cooking.

(20) Besides learning about food, I discovered how some Japanese women wear kimonos for special events. (21) Kimonos are long, loose robes with wide sleeves shaped like bells. (22) I asked my mom if she thought Mrs. Fujiwara and Mei would be wearing kimonos. (23) She laughed and said that she didn't think so.

(24) When we arrived at the family's house Saturday evening, they were cooking hamburgers on the grill. (25) I ate the best cheeseburger I've ever had! (26) We also ate corn on the cob, potato salad, and watermelon. (27) After dinner, Mr. Fujiwara played some music for us. (28) I'm glad the Fujiwaras are our neighbors.

Target 4 Reasoning and Evaluation

3. What inference can be made about the narrator?

- A The narrator does not want to go to the new neighbors' home for dinner.
- B The narrator does not enjoy school.
- C The narrator wants to make soup for the dinner.
- D The narrator listens well in school.

Target 3 Word Meaning

4. Read the sentence.

My mom told her that we would be delighted to come to dinner.

An antonym is a word that means the opposite of another word. What is an antonym for the word "delighted"?

- A displeased
- B happy
- C sad
- D scared

Target 5 Analysis within/across Texts

5. What does the first paragraph uncover about the plot of the text?

- (A) It suggests that the neighbors will become friends.
- (B) It suggests that a big storm is coming.
- (C) It suggests that the Fujiwara family moves frequently.
- (D) It suggests that the neighbors will visit many places together.

Target 6 Text Structures and Features

6. Read the sentences.

When we arrived at the family's house Saturday evening, they were cooking hamburgers on the grill. I ate the best cheeseburger I've ever had! We also ate corn on the cob, potato salad, and watermelon.

Why did the narrator choose to end the passage with what they ate for dinner?

- (A) to show that it was the Fourth of July
- (B) to show that our assumptions are not always correct
- (C) to show the importance of eating fruits and vegetables
- (D) to show that grilling food is common in the neighborhood

Target 7 Language Usage

7. Read the sentences.

I asked my mom if she thought Mrs. Fujiwara and Mei would be wearing kimonos. She laughed and said that she didn't think so.

What does the word "laughed" suggest about the mom's reaction to the question?

- (A) It shows that she just heard a funny joke on television.
- (B) It shows that the mom wants to cheer the narrator up.
- (C) It shows that the mom does not think that Mrs. Fujiwara and Mei will be wearing kimonos.
- (D) It shows that the mom is unwilling to answer the question.

Claim 2 Target 9 Edit/Clarify (Conventions)

8. Choose the sentence that is punctuated correctly.

- (A) The class will be reading the book Beauty and the Beast.
- (B) The class will be reading the book "Beauty and the Beast".
- (C) The class will be reading the book "Beauty and the Beast".
- (D) The class will be reading the book *Beauty and the Beast*.

16.1 Independent Practice

CA CC 6.SP.3, 6.SP.5, 6.SP.5a, 6.SP.5b, 6.SP.5c, 6.SP.5d



Personal Math Trainer
Online Practice and Help

Several students in Ashton’s class were randomly selected and asked how many text messages they sent yesterday. Their answers were 1, 0, 10, 7, 13, 2, 9, 15, 0, 3.

5. How many students were asked? How do you know?

6. Find the mean and the median for these data.

Mean = _____ Median = _____

The points scored by a basketball team in its last 6 games are shown. Use these data for 7 and 8.

Points Scored					
73	77	85	84	37	115

7. Find the mean score and the median score.

Mean = _____ Median = _____

8. Which measure better describes the typical number of points scored? Explain.

Some people were asked how long it takes them to commute to work. Use the data for 9–11.

9. What units are used for the data? What should you do before finding the mean and median number of minutes?

16 min	5 min
7 min	8 min
14 min	12 min
0.5 hr	1 hr

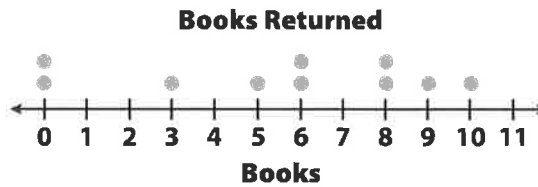
10. Find the mean and median number of minutes.

Mean = _____ Median = _____

11. Which measure do you think is more typical of the data?



- 12. Critique Reasoning** For two weeks, the school librarian recorded the number of library books returned each morning. The data are shown in the dot plot. The librarian found the mean number of books returned each morning.



$$\frac{8 + 6 + 10 + 5 + 9 + 8 + 3 + 6}{8} = \frac{55}{8} = 6.875$$

Is this the correct mean of this data set? If not, explain and correct the answer.

- 13. Critical Thinking** Lauren's scores on her math tests are 93, 91, 98, 100, 95, 92, and 96. What score could Lauren get on her next math test so that the mean and median remain the same? Explain your answer.

- 14. Persevere in Problem Solving** Yuko wants to take a job selling cars. Since she will get a commission for every car she sells, she finds out the sale price of the last four cars sold at each company.

Company A: \$16,000; \$20,000; \$25,000; \$35,000;

Company B: \$21,000, \$23,000, \$36,000, \$48,000

- a.** Find the mean selling price at each company.

- b.** Find the median selling price at each company.

- c. Communicate Mathematical Ideas** At either company, Yuko will get paid a commission of 20% of the sale price of each car she sells. Based on the data, where do you recommend she take a job? Why?
