

Name _____

Period _____

Unit 3 Rate and Percent Week of 1/13/20

Learning Targets from 6th Grade Common Core State Standards:

Lesson 13 Benchmark Percentages

- When I read or hear that something is 10%, 25%, 50%, or 75% of an amount, I know what fraction of that amount they are referring to.

Lesson 14 Solving Percentages

- I can choose and create diagrams to help me solve problems about percentages.

Lesson 15 Finding This Percent of That

- I can solve different problems like "What is 40% of 60?" by dividing and multiplying.

Lesson 16 Finding the Percentage

- I can solve different problems like "60 is what percentage of 40?" by dividing and multiplying.

This Week's Vocabulary Words:

percent double number line tape diagram rate unit rate

Homework is due the following day.

Day	Class work—All in Spiral using iPad ☺	Homework	Complete	Correct
Monday	Lesson 13 Benchmark Percentages	Page 1: Lesson 13 Practice Problems—All	/5	/9
Tuesday	Lesson 14 Solving Percentages	Pages 2 & 3: Lesson 14 Practice Problems—All	/5	/21
Wednesday	Lesson 15 Finding This Percent of That	Page 4: Lesson 15 Practice Problems—All	/5	/6
Thursday	Lesson 16 Finding the Percentage	Page 5: and 16 Practice Problems—All	/5	/6
Friday	Assessment (short) Percents	None—have a restful break		
		Total	/20	
		Quality	/4	
		Total	/24	

Homework Quality—Remember, if you don't know how to complete a problem you should read it again and write down the information you have, draw a picture, or write a question you have, please do not leave blank or write "?" or idk. You can also come in and get help before school☺!

- Work is **thorough** with **detailed** explanations (2 pts)
 Homework is corrected (with additions needed) in a different color pen/pencil (2 pts)

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Unit 3, Lesson 13: Benchmark Percentages

1.
 - a. How can you find 50% of a number quickly in your head?
 - b. Andre lives 1.6 km from school. What is 50% of 1.6 km?
 - c. Diego lives $\frac{1}{2}$ mile from school. What is 50% of $\frac{1}{2}$ mile?
2. There is a 10% off sale on laptop computers. If someone saves \$35 on a laptop, what was its original cost? If you get stuck, consider using the table.

savings (dollars)	percentage
35	10
?	100

3. Explain how to calculate these mentally.

- a. 15 is what percentage of 30?
- b. 3 is what percentage of 12?
- c. 6 is what percentage of 10?

4. Noah says that to find 20% of a number he divides the number by 5. For example, 20% of 60 is 12, because $60 \div 5 = 12$. Does Noah's method always work? Explain why or why not.
5. Diego has 75% of \$10. Noah has 25% of \$30. Diego thinks he has more money than Noah, but Noah thinks they have an equal amount of money. Who is right? Explain your reasoning.

(from Unit 3, Lesson 10)

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Unit 3, Lesson 14: Solving Percentage Problems

1. For each problem, explain or show your reasoning.

a. 160 is what percentage of 40?

b. 40 is 160% of what number?

c. What number is 40% of 160?

1/3

2. A store is having a 20%-off sale on all merchandise. If Mai buys one item and saves \$13, what was the original price of her purchase? Explain or show your reasoning.

1/1

3. The original price of a scarf was \$16. During a store-closing sale, a shopper saved \$12 on the scarf. What percentage discount did she receive? Explain or show your reasoning.

1

4. Select **all** the expressions whose value is larger than 100.

A. 120% of 100

B. 50% of 150

C. 150% of 50

D. 20% of 800

E. 200% of 30

F. 500% of 400

G. 1% of 1,000

1/3

5. An ant travels at a constant rate of 30 cm every 2 minutes.

a. At what pace does the ant travel per centimeter?

b. At what speed does the ant travel per minute?

1/2

(from Unit 3, Lesson 8)

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6. Is $3\frac{1}{2}$ cups more or less than 1 liter? Explain or show your reasoning. (Note: 1 cup \approx 236.6 milliliters)

1

(from Unit 3, Lesson 4)

7. Name a unit of measurement that is about the same size as each object.

a. The distance of a doorknob from the floor is about 1 _____.

b. The thickness of a fingernail is about 1 _____.

c. The volume of a drop of honey is about 1 _____.

d. The weight or mass of a pineapple is about 1 _____.

e. The thickness of a picture book is about 1 _____.

f. The weight or mass of a buffalo is about 1 _____.

g. The volume of a flower vase is about 1 _____.

h. The weight or mass of 20 staples is about 1 _____.

i. The volume of a melon is about 1 _____.

j. The length of a piece of printer paper is about 1 _____.

10

(from Unit 3, Lesson 2)

21

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Unit 3, Lesson 15: Finding This Percent of That

1. a. To find 40% of 75, Priya calculates $\frac{2}{5} \cdot 75$. Does her calculation give the correct value for 40% of 75? Explain or show how you know.

- b. If x represents a number, does $\frac{2}{5} \cdot x$ always represent 40% of that number? Explain your reasoning.

1/2

2. Han spent 75 minutes practicing the piano over the weekend. For each question, explain or show your reasoning.

- a. Priya practiced the violin for 152% as much time as Han practiced the piano. How long did she practice?

- b. Tyler practiced the clarinet for 64% as much time as Han practiced the piano. How long did he practice?

1/2

3. Last Sunday 1,575 people visited the amusement park. 56% of the visitors were adults, 16% were teenagers, and 28% were children ages 12 and under. Find the number of adults, teenagers, and children that visited the park.

1

4. Order from greatest to least:

- 55% of 180
- 300% of 26

1 1/6

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Unit 3, Lesson 16: Finding the Percentage

1. A sign in front of a roller coaster says "You must be 40 inches tall to ride." What percentage of this height is:

a. 34 inches?

b. 54 inches?

 $\frac{1}{2}$

2. At a hardware store, a tool set normally costs \$80. During a sale this week, the tool set costs \$12 less than usual. What percentage of the usual price is the savings? Explain or show your reasoning.

 $\frac{1}{10}$

3. A bathtub can hold 80 gallons of water. The faucet flows at a rate of 4 gallons per minute. What percentage of the tub will be filled after 6 minutes?

 $\frac{1}{10}$

4. The sale price of every item in a store is 85% of its usual price.

a. The usual price of a backpack is \$30, what is its sale price?

 $\frac{1}{2}$

b. The usual price of a sweatshirt is \$18, what is its sale price?

 $\frac{1}{6}$