

Name \_\_\_\_\_

Period \_\_\_\_\_

## Unit 3 Rate and Percent Week of 12/10/18

Learning Targets from 6<sup>th</sup> Grade Common Core State Standards:

Lesson 8 More about constant speed

- I can solve more complicated problems about constant speed situations.
- 

Lesson 9 Solving Rate Problems

- I can choose how to use unit rates to solve problems, which unit rate to use based on how I plan to solve the problem.

Lesson 10 What are percentages?

- I can explain the meaning of percentages using dollars and cents as an example.
- I can create a double number line with percentages on one line and dollar amounts on the other line.

Lesson 11 Percentages and Double Number Lines

- I can use double number line diagrams to solve different problems like "What is 40% of 60?" or "60 is 40% of what number?"

This Week's Vocabulary Words:

convert      equivalent ratios      unit      unit rate      unit price      speed      percent

Homework is due the following day.

Day	Class work—All in Spiral using iPad ☺	Homework	Complete	Correct
Monday	Lesson 8 More about constant speed	Pages 1 & 2: Lesson 8 Practice Problems—All	/4	/9
Tuesday	Lesson 9 Solving Rate Problems	Pages 3 & 4: Lesson 9 Practice Problems—All	/4	/9
Wednesday	Mid Unit Assessment Rates	None		
Thursday	Lesson 10 What are percentages?	Pages 5 & 6: Lesson 10 Practice Problems—All	/4	/24
Friday	Lesson 11 Percentages and double number lines	None		
		Total	/12	
		Quality	/4	
		Total	/16	

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 8: More about Constant Speed

1. A kangaroo hops 2 kilometers in 3 minutes. At this rate:

a. How long does it take the kangaroo to travel 5 kilometers?

b. How far does the kangaroo travel in 2 minutes?

$\frac{1}{2}$

2. Mai runs around a 400-meter track at a constant speed of 250 meters per minute. How many minutes does it take Mai to complete 4 laps of the track? Explain or show your reasoning.

1

3. At 10:00 a.m., Han and Tyler both started running toward each other from opposite ends of a 10-mile path along a river. Han runs at a pace of 12 minutes per mile. Tyler runs at a pace of 15 minutes per mile.

a. How far does Han run after a half hour? After an hour?

$\frac{1}{2}$

b. Do Han and Tyler meet on the path within 1 hour? Explain or show your reasoning.

4. Two skateboarders start a race at the same time. Skateboarder A travels at a steady rate of 15 feet per

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second. Skateboarder B travels at a steady rate of 22 feet per second. After 4 minutes, how much farther will Skateboarder B have traveled? Explain your reasoning.

1

(from Unit 2, Lesson 16)

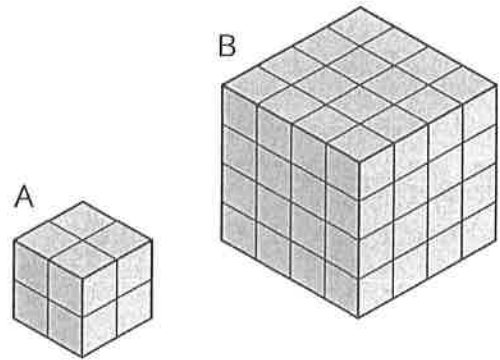
5. There are 4 tablespoons in  $\frac{1}{4}$  cup. There are 2 cups in 1 pint. How many tablespoons are there in 1 pint? If you get stuck, consider drawing a double number line or making a table.

1

(from Unit 3, Lesson 4)

6. Two larger cubes are made out of unit cubes. Cube A is 2 by 2 by 2. Cube B is 4 by 4 by 4. The side length of Cube B is twice that of Cube A.

a. Is the surface area of Cube B also twice that of Cube A? Explain or show your reasoning.



b. Is the volume of Cube B also twice that of Cube A? Explain or show your reasoning.

(from Unit 1, Lesson 12)

1/2

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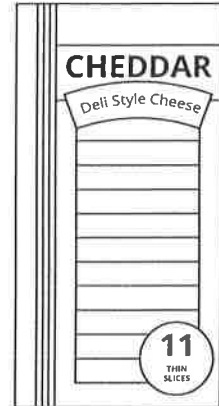
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## Unit 3, Lesson 9: Solving Rate Problems

1. This package of sliced cheese costs \$2.97.

How much would a package with 18 slices cost at the same price per slice? Explain or show your reasoning.



2. A copy machine can print 480 copies every 4 minutes. For each question, explain or show your reasoning.

a. How many copies can it print in 10 minutes?

b. A teacher printed 720 copies. How long did it take to print?

3. Order these objects from heaviest to lightest. (Note: 1 pound = 16 ounces, 1 kilogram  $\approx$  2.2 pounds, and 1 ton = 2,000 pounds)

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item	weight
school bus	9 tons
horse	1,100 pounds
elephant	5,500 kilograms
grand piano	15,840 ounces

1

4. Andre sometimes mows lawns on the weekend to make extra money. Two weeks ago, he mowed a neighbor's lawn for  $\frac{1}{2}$  hour and earned \$10. Last week, he mowed his uncle's lawn for  $\frac{3}{2}$  hours and earned \$30. This week, he mowed the lawn of a community center for 2 hours and earned \$30.

Which jobs paid better than others? Explain your reasoning.

1

(from Unit 3, Lesson 5)

5. Calculate and express your answer in decimal form.

a.  $\frac{1}{2} \cdot 17$

c.  $(0.2) \cdot 40$

b.  $\frac{3}{4} \cdot 200$

d.  $(0.25) \cdot 60$

(from Unit 3, Lesson 1)

4

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## Unit 3, Lesson 10: What Are Percentages?

1. What percentage of a dollar is the value of each coin combination?

- a. 4 dimes
- b. 1 nickel and 3 pennies
- c. 5 quarters and 1 dime

1/3

2. a. List three different combinations of coins, each with a value of 30% of a dollar.

b. List two different combinations of coins, each with a value of 140% of a dollar.

1/2

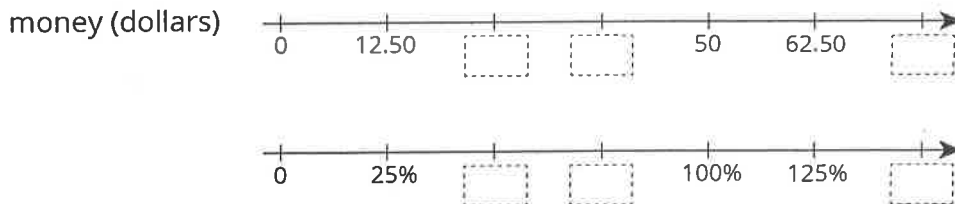
3. The United States government used to make coins of many different values. For each coin, state its worth as a percentage of \$1.



- a.  $\frac{1}{2}$  cent
- b. 3 cents
- c. 20 cents
- d.  $\$2\frac{1}{2}$
- e. \$5

1/5

4. Complete the double number to line show percentages of \$50.



1/2

5. Elena bought 8 tokens for \$4.40. At this rate:

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a. How many tokens could she buy with \$6.05?

b. How much do 19 tokens cost?

12

(from Unit 3, Lesson 9)

6. A snail travels 10 cm in 4 minutes. At this rate:

a. How long will it take the snail to travel 24 cm?

b. How far does the snail travel in 6 minutes?

12

(from Unit 3, Lesson 8)

7. a. 3 tacos cost \$18. Complete the table to show the cost of 4, 5, and 6 tacos at the same rate.

b. If you buy  $t$  tacos for  $c$  dollars, what is the unit rate?

number of tacos	cost in dollars	rate in dollars per taco
3	18	
4		
5		
6		
$t$	$c$	

18

(from Unit 3, Lesson 7)

24

6