Thursday HW

NAME _____ DATE _____ PERIOD _____

Unit 3, Lesson 7: Equivalent Ratios Have the Same Unit Rates

1. A car travels 55 miles per hour for 2 hours. Complete the table.

time (hours)	distance (miles)	miles per hour
1	55	55
$\frac{1}{2}$	27.5	55
$1\frac{1}{2}$	82.5	55
2	110	55

(handwritten: ÷2, ÷2, ×2, ×2)

2. The table shows the amounts of onions and tomatoes in different-sized batches of a salsa recipe.

   Elena notices that if she takes the number in the tomatoes column and divides it by the corresponding number in the onions column, she always gets the same result.   **× 8**

   What is the meaning of the number that Elena has calculated?   *It means she needs 8 times as many ounces of tomatoes as onions*

onions (ounces)	tomatoes (ounces)
2	16
4	32
6	48

3. A restaurant is offering 2 specials: 10 burritos for $12, or 6 burritos for $7.50. Noah needs 60 burritos for his party. Should he buy 6 orders of the 10-burrito special or 10 orders of the 6-burrito special? Explain your reasoning.   *$\frac{\$12}{10\ bur}$ × 6 orders ↓ $72 or $\frac{\$7.50}{6\ bur}$ × 10 orders $75   cheaper*

4. Complete the table so that the cost per banana remains the same.

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number of bananas	cost in dollars	unit price (dollars per banana)
4	2.00	0.50
6	3.00	0.50
7	3.50	0.50
10	5.00	0.50
20	10.00	0.50
33	16.50	0.50

5. Two planes travel at a constant speed. Plane A travels 2,800 miles in 5 hours. Plane B travels 3,885 miles in 7 hours. Which plane is faster? Explain your reasoning.

miles per hour

A   faster   B

$divide \rightarrow \dfrac{2,800 \text{ mi}}{5 \text{ hr}} = \dfrac{560 \text{ mi}}{1 \text{ hr}}$ $divide \rightarrow \dfrac{3,885 \text{ mi}}{7 \text{ hr}} = \dfrac{555 \text{ mi}}{1 \text{ hr}}$

(from Unit 3, Lesson 5)

6. A car has 15 gallons of gas in its tank. The car travels 35 miles per gallon of gas. It uses $\frac{1}{35}$ of a gallon of gas to go 1 mile.

a. How far can the car travel with 15 gallons? Show your reasoning.

$15 \text{ gallons} \times \dfrac{35 \text{ miles}}{1} = 525 \text{ mi}$

b. How much gas does the car use to go 100 miles? Show your reasoning.

mi	$\frac{1}{35}$ gallons
100	$\frac{100}{35} = 2\frac{30}{35}$

×100   × 100

$2\frac{6}{7}$ gallons or
2.857 gallons

(from Unit 3, Lesson 6)

miles | gallons
35	1
1	$\frac{1}{35}$
525	15
×15

×100 100 $\frac{100}{35}$ ×100