Name: _____ Date: _____

1. Rob attends 3 music classes for $15.

   a. What ratio represents the situation?

   b. Find two equivalent ratios for the situation. Show or explain your reasoning.

2. Victor made chocolate milk by mixing 10 ounces of milk with 2 teaspoons of chocolate syrup. Which of the combinations of milk and chocolate syrup below would *not* taste the same as Victor's chocolate milk?

   A. 5 ounces of milk and 1 teaspoon of chocolate syrup
   B. 15 ounces of milk and 7 teaspoons of chocolate syrup
   C. 20 ounces of milk and 4 teaspoons of chocolate syrup
   D. 30 ounces of milk and 6 teaspoons of chocolate syrup

3. Explain or show why 6:18 and 2:9 are *not* equivalent ratios.

4. Which of the ratios below are equivalent to 5:3? Select *all* correct answers.

   A. 3:5
   B. 6:10
   C. 10:6
   D. 15:13
   E. 20:12

5. Tyler has dimes and quarters in a ratio of 2:6. His sister, Jen, has dimes and quarters in a ratio of 12:36. Jen says their ratios of dimes to quarters are the same.
   a. Is Jen correct? Explain or show your reasoning.

b. Does this mean that Tyler and Jen have the same amount of money? Explain your reasoning.

6. The table below includes equivalent ratios. Fill in the missing blanks.

Drops of food dye	Cups of water
	15
	30
2	5
4	

7. A recipe for trail mix says: "Mix 7 ounces of almonds with 5 ounces of raisins." The table below has been started to show how many ounces of almonds and raisins would be in different-sized batches of this trail mix.

Almonds (oz)	Raisins (oz)
7	5
28	
	10
3.5	
	250
56	

a. Complete the table so that the ratios represented by each row are equivalent.

b. What methods did you use to fill in the table?

c. How do you know that each row shows a ratio that is equivalent to 7:5? Explain your reasoning.

8. A car can travel 105 miles for every 3 gallons of gas in the tank.

   a. Create a table of equivalent ratios to represent the relationship between the number of miles the car can travel and the number of gallons of gas in the tank.

   b. Use the table to determine if the following statements are true or false. Put an X in the appropriate column for each statement.

Statement	True	False
The car can travel 35 miles per every 1 gallon of gas.		
The car can travel 150 miles on 4 gallons of gas.		
10 gallons of gas will allow the car to travel 350 miles.		
2 gallons of gas will allow the car to travel for 70 miles.		

9. Kyle makes $81 in 9 hours.

   a. How much does Kyle earn per hour?

   b. How long does Kyle work to earn $1?

10. A librarian can replace 80 books on the shelves in 4 hours.

   a. How many books can he replace on the shelves in 1 hour?

   b. How many minutes does it take him to replace 1 book on a shelf?

11. Write each situation as an equivalent unit rate.

   a. 4 minutes per $\frac{1}{2}$ mile

b. $1.89 for every 3 ounces

c. 6 sandwiches made per 30 minutes

12. Manny is participating in a Bike-a-thon and travels at a constant rate of 6 miles in 20 minutes.

a. How long will it take Manny to travel 9 miles?

b. How long will it take Manny to travel 10 miles?

c. Manny rode his bike for 3 hours. How far did he travel?

13. Leah takes swimming lessons and is in Level 1. She can swim at a constant speed of $\frac{3}{4}$ meters per second. To advance to Level 2, she must be able to swim 60 meters in 100 seconds. Based on Leah's swimming rate, can she advance to Level 2?

14. Anika babysits to make extra money. For every hour, she charges $6.

a. Use the ratio to complete the table.

Time (hours)	1	2		4	
Money (dollars)			18		30

b. If you know the number of hours, h, Anika babysat for, how can you determine the amount of money, m, she made? Write an equation to represent m.

c. If you know the amount of money Anika made, m, how can you determine the number of hours, h, she babysat for? Write an equation to represent h.

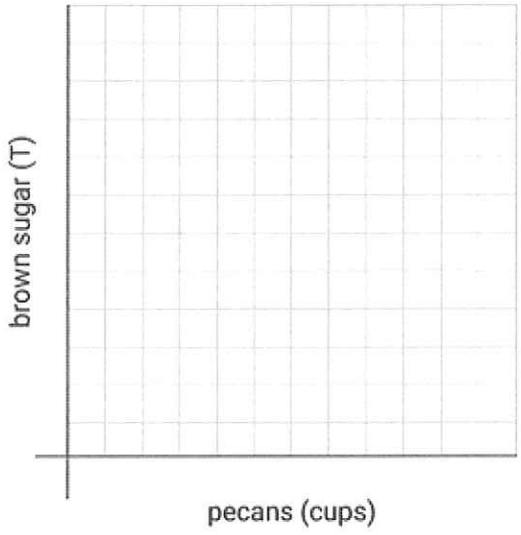
d. For the equation you wrote in part b, which is the dependent variable and which is the independent variable?

15. In a pecan pie recipe, the ratio of tablespoons of brown sugar to cups of pecans is 3:1.

a. Complete the table to show the relationship between tablespoons of brown sugar and cups of pecans.

Pecans (cups)	Brown sugar (tablespoons)
1	
2	
3	
4	
5	

b. Graph the situation in the coordinate plane.



16. Mateo has $6\frac{1}{2}$ cups of sugar. How many batches of cookies can he make if each batch requires $\frac{3}{4}$ cups of sugar? Show your reasoning.

17. One dose of medicine is $\frac{2}{3}$ of a teaspoon. How many doses are in $2\frac{3}{4}$ teaspoons of the medicine? Show your reasoning.

18. Yolanda has $\frac{3}{4}$ of a cup of sugar. This is $\frac{3}{5}$ of what she needs. How much sugar does Yolanda need? Show your reasoning.

Mathematics Reference Sheets
Grades 5 -8

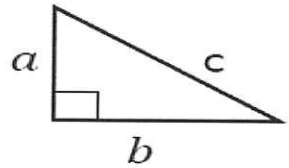
Assessment Reference Sheet

Grade 8

1 inch = 2.54 centimeters
1 meter = 39.37 inches
1 mile = 5280 feet
1 mile = 1760 yards
1 mile = 1.609 kilometers

1 kilometer = 0.62 mile
1 pound = 16 ounces
1 pound = 0.454 kilograms
1 kilogram = 2.2 pounds
1 ton = 2000 pounds

1 cup = 8 fluid ounces
1 pint = 2 cups
1 quart = 2 pints
1 gallon = 4 quarts
1 gallon = 3.785 liters
1 liter = 0.264 gallons
1 liter = 1000 cubic centimeters

Triangle	$A = \frac{1}{2}bh$
Parallelogram	$A = bh$
Circle	$A = \pi r^2$
Circle	$C = \pi d \text{ or } C = 2\pi r$
General Prisms	$V = Bh$
Cylinder	$V = \pi r^2 h$
Sphere	$V = \frac{4}{3}\pi r^3$
Cone	$V = \frac{1}{3}\pi r^2 h$
Pythagorean Theorem	 $a^2 + b^2 = c^2$