Sixth Grade Review 10: **Ratios, Rates, Proportions**   Name: _____

Show all work on a separate sheet of paper.

Write each ratio as a fraction in simplest form.

1.	48 monkeys to 72 bananas		2.	18 pens to 30 pencils	
3.	36 cups to 56 glasses				

Express each ratio as a unit rate.

4.	$96 for 8 DVDs		5.	4,200 calories in 28 miles	
6.	72 cookies for 24 kids				

7.	Mr. Wright bought two dozen candy bars for $9.60. How much did he pay per candy bar?	
8.	In a recent survey of intermediate school students, 5 out of 8 listed their math teacher as their favorite teacher. If there are 600 students at DIS, how many of them would list their math teacher as their favorite?	
9.	Which of the following ratios is a proportion? A. $\dfrac{6}{16} = \dfrac{10}{32}$ C. $\dfrac{2}{6} = \dfrac{1}{12}$ B. $\dfrac{4}{10} = \dfrac{10}{40}$ D. $\dfrac{6}{10} = \dfrac{9}{15}$	

Solve each proportion. Use the butterfly method (cross products) and show all steps in the boxes below to receive full credit.

10. $\dfrac{2}{9} = \dfrac{16}{x}$	11. $\dfrac{2}{10} = \dfrac{5}{y}$	12. $\dfrac{7}{20} = \dfrac{d}{80}$

13-14.	If you buy 3 frappuccinos for $8.16, how much will 5 frappucinos cost? Write a proportion and then solve the proportion.	Proportion Answer
15-16.	Mrs. Atkins ate 45 hot dogs in 6 minutes. Mr. Underwood ate 66 hot dogs in 11 minutes. Who was eating hot dogs faster and by what rate?	Who was faster How much faster (rate)

Determine the better buy by finding the unit rate for each item

17.	Broccoli: **4 lbs for $6.60 or 6 lbs for $9.60**? A. 4 lbs because the unit rate is $26.40 per pound. B. 4 lbs because the unit rate is $1.65 per pound. C. 6 lbs because the unit rate is $57.60 per pound. D. 6 lbs because the unit rate is $1.60 per pound.	
18.	Dr. Pepper: **20 oz for $1.50 or 32 oz for $1.92**? A. 20 oz because the unit rate is $0.075 per ounce. B. 32 oz because the unit rate is $0.60 per ounce. C. 20 oz because the unit rate is $0.75 per ounce. D. 32 oz because the unit rate is $0.06 per ounce.	

19.	In a first-aid kit the ratio of large bandages to small bandages is 3 to 2. Based on this ratio, how many large bandages are in the kit if there are a total of 80 bandages? A. 32 C. 16 B. 48 D. 40	
20.	A train travels at 850 miles in five hours. What is the average speed in one hour?	
21.	Luke Skywalker has 6 fabulous friends, 14 evil enemies, and 12 awesome animals. Write the ratio of animals to enemies in simplest form.	
22.	In band class Mr. Oglesby is able to play 480 notes in 3 minutes. What is the ratio of notes to minutes in simplest form? A. 16 to 1 C. 3 to 16 B. 3 to 480 D. 160 to 1	
23.	Mrs. Fauatea went to the arcade to play Pokémon. She paid $2 for every 11 token she bought. She spent a total of $16 on tokens. Which equation can be used to determine t, the number of token Mrs. Fauatea bought? A. $\dfrac{2}{16}=\dfrac{t}{11}$ C. $\dfrac{18}{t}=\dfrac{11}{2}$ B. $\dfrac{2}{11}=\dfrac{t}{16}$ D. $\dfrac{11}{2}=\dfrac{t}{16}$	
24.	In math class on Friday there were 18 students sleeping and 8 students gazing at the ceiling. What was the ratio of gazing students to sleeping students? A. 4 to 9 C. 8 to 10 B. 18 to 8 D. 5 to 4	

25.	Mr. Mangham did many different activities last week. • Basketball: burned 11 calories per minute • Jogging: burned 9 calories per minute • Swimming: burned a total of 900 calories in 3 hours Mr. Mangham did each activity for 3 hours last week. Based on the information in the list, which statement is true? A. He burned 2,700 calories swimming because $900 \times 3 = 2700$. B. He burned a total of 4500 calories because $(11 \times 180) + (9 \times 180) + 900 = 4500$. C. He burned 1,620 calories per hour while jogging because $9 \times 180 = 1620$. D. He burned a total of 920 calories because $11 + 9 + 900 = 920$.	
26.	At school on Friday, 4 out of 5 students were wearing beards. There were 600 students at school on Friday. How many of the students were wearing hats? A. 599, because $600 - (5 - 4) = 599$. B. 480, because $\dfrac{4}{5} = \dfrac{480}{600}$. C . 30, because $600 \div (5 \times 4) = 30$. D. 750, because $\dfrac{4}{5} = \dfrac{600}{750}$.	
27.	A worker at Domino's pizza uses 200 tomatoes to make 50 pizzas. At this rate, how many tomatoes will the worker use to make 350 pizzas?	
28.	Mr. Silvia is making a sauce for a chicken dish. The list below shows the amount of each ingredient he needs in order to make 4 servings of the sauce. 2 tablespoons black pepper, 1 cup peanut butter, 3 tablespoons of vinegar, 2 tablespoons of soy sauce, 1 cup of water Based on this information, which statement is true? A. For 16 servings, he would need to use 12 tablespoons of vinegar. B. For 20 servings, he would need to use 7 tablespoons of soy sauce. C. For 2 servings, he would need to use 4 tablespoons of black pepper. D. For 12 servings, he would need to use 9 cups of peanut butter.	