Math 6 - Unit 2: Rates, Ratios & Proportions Name: _____

Mid-Unit Test – Study Guide

Class Period: 1 2 3 4 Date: _____

Vocabulary

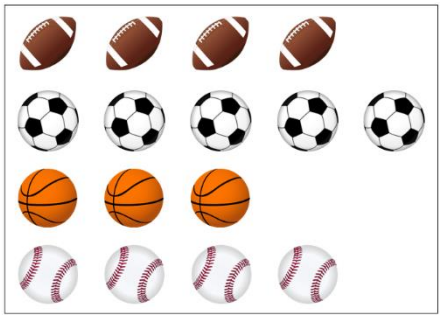
For numbers 1-3, write the definition for each term.

1) Define rate: _____

2) Define unit rate: _____

3) Define ratio: _____

Use the picture to the right to answer questions 4-8



4) What is the ratio of footballs to ALL balls?

5) What is the ratio of basketballs to soccer balls and footballs?

6) Was the ratio in question #5 a part to part or part to whole ratio?

7) Write a ratio that shows a part to part relationship.

8) Write a ratio that shows a part to whole relationship.

9) An animal shelter has 18 kittens and 9 puppies available for adoption. What is the ratio of puppies to kittens?

10) ECMS spent $105 for 15 pizzas for the Homework Stars Party. What is the unit rate (price per pizza?)

11) Use ratio language to write the following: 4 bananas : 2 apples

Use the table to answer question 12-14

The table below shows the rates of 2 racecars in a race. Evaluate the unit rates to complete the chart.

Racecar	Rate	Unit Rate (miles per hour)
Red Car	360 miles/3 hours	12)
Yellow Car	750 miles/5 hours	13)

14) In the chart above, which car was the fastest?

15) Kayla bought 6 candies for $3.60. Isaac bought 15 candies for $11.25 How much did each student pay per candy?

16) Complete the ratio table.

13		39	52
1	2		

17) Complete the ratio table.

4		20	
7	21		56

18) Complete the ratio table.

2		18	
	9	27	90

Determine if the following ratios are equivalent. You can use a ratio table to help you or simplify both ratios to see if you get the same ratio.

19) Is the pair of ratios equivalent? $\frac{2}{3} = \frac{4}{6}$

20) Is the pair of ratios equivalent? $\frac{14}{20} = \frac{7}{10}$

21) Is the pair of ratios equivalent? $\frac{12}{40} = \frac{6}{10}$

22) Explain how to simplify a ratio: _____

_____

_____

_____

Simplify the following ratios:

23) 9 to 27

24) 4 : 26

25) $\frac{14}{56}$

26) 11 : 13

Math 6 – Unit 2: Rates, Ratios & Proportions Name: _____

Mid-Unit Test – Study Guide

ANSWER KEY Class Period: 1 2 3 4 Date: _____

Vocabulary

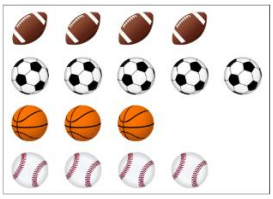
For numbers 1-3, write the definition for each term.

1) Define rate: **A ratio comparing quantities of different units**

2) Define unit rate: **A rate in which one value is equal to 1**

3) Define ratio: **A comparison of two quantities by division**

Use the picture to the right to answer questions 4-8 SIMPLIFY!



4) What is the ratio of footballs to ALL balls? **4:16 simplified 1:4**

5) What is the ratio of basketballs to soccer balls and footballs? **3:9 simplified 1:3**

6) Was the ratio in question #5 a part to part or part to whole ratio? **Part to Part**

7) Write a ratio that shows a part to part relationship. **Answers will vary.**

8) Write a ratio that shows a part to whole relationship. **Answers will vary, but last number must be 16**

9) An animal shelter has 18 kittens and 9 puppies available for adoption. What is the ratio of puppies to kittens? **9:18 simplified 1:2**

10) ECMS spent $105 for 15 pizzas for the Homework Stars Party. What is the unit rate (price per pizza?) **$7 per pizza**

11) Use ratio language to write the following: 4 bananas : 2 apples **For every 4 bananas there are 2 apples**

Use the table to answer question 12-14

The table below shows the rates of 2 racecars in a race. Evaluate the unit rates to complete the chart.

Racecar	Rate	Unit Rate (miles per hour)
Red Car	360 miles/3 hours	12) **120 mph**
Yellow Car	750 miles/5 hours	13) **150 mph**

14) In the chart above, which car was the fastest? **Yellow**

15) Kayla bought 6 candies for $3.60. Isaac bought 15 candies for $11.25 How much did each student pay per candy? **Kayla ($0.60 per candy), Isaac ($0.75 per candy)**

16) Complete the ratio table.

13	**26**	39	52
1	2	**3**	**4**

17) Complete the ratio table.

4	**12**	20	**32**
7	21	**35**	56

18) Complete the ratio table.

2	**6**	18	**60**
3	9	27	90

Determine if the following ratios are equivalent. You can use a ratio table to help you or simplify both ratios to see if you get the same ratio.

19) Is the pair of ratios equivalent? $\frac{2}{3}=\frac{4}{6}$ **Yes**

20) Is the pair of ratios equivalent? $\frac{14}{20}=\frac{7}{10}$ **Yes**

21) Is the pair of ratios equivalent? $\frac{12}{40}=\frac{6}{10}$ **No**

22) Explain how to simplify a ratio: **Divide both numbers by the same factors until the only common factor is 1.**

Simplify the following ratios:

23) 9 to 27 **1 to 3**

24) 4 : 26 **2:13**

25) $\frac{14}{56}$ $\frac{1}{4}$

26) 11 : 13 **11:13**