ANSWER KEY

NAME:_____

DATE:_____

RATIOS, RATES, AND UNIT RATES

1. There are 5 cats and 6 dogs. The ratio of dogs to animals is: 6 dogs : 11 animals ⇒ 6:11

The ratio used above demonstrates a part (6 dogs) to whole (11 animals total) ratio.

2. A 10 pound bag of jellybeans cost 15$. The ratio of pounds to cost is: 10 pounds : $15 ⇒ 10:15

3. Sarah can run 5 miles in 1 hour. The ratio of miles per hour is: 5 miles : 1 hour ⇒ 5:1

INVESTIGATION: What differences do you notice in the 3 ratios listed above?

* The ratio in the first problem has two comparable groups. (5 cats and 6 dogs : BOTH ARE ANIMALS)
* The ratio in problem #2 has two groups that can't be compared. (cost and pounds don't relate like #1)
* The ratio in problem #3 has two unrelatable groups but it is also saying how many times miles can fit into 1 hour

TOPIC	DEFINITION
RATIO	A ratio is a relationship between 2 comparable groups. (#1: dogs and cats are animals)
RATE	A special ratio that describes a relationship between two different groups (problem #2)
UNIT RATE	A special rate that describes how many times 1 group can fit exactly ONCE into a second group. (problem #3)

PRACTICE:

1. John has bought 5 bags of apples for 25 dollars. How can we illustrate this as a rate?

5 bags : 25 dollars or 25 dollars : 5 bags

5:25 25:5

2. Using the information above, how much does it cost for 1 bag of apples? Write your answer as a unit rate.

If 5 bags cost 25 dollars, then

25 dollars : 5 bags

or

$25:5 = \frac{25}{5} \div \frac{5}{5} = \frac{5 \text{ dollars}}{1 \text{ bag}}$

1 bag costs 5 dollars : **5:1**