

Name _____
Due Date _____

Ratios Study Guide

Q1: The Lakeland Middle School boys' golf team is made up of seventh and eighth graders. There are 12 seventh graders and 17 eighth graders on the team.

Part A

Write the ratio of seventh graders to eighth graders and the ratio of eighth graders to seventh graders on the team.

The ratio of seventh graders to eighth graders is _____

The ratio of eighth graders to seventh graders is _____

Part B

Are the ratios you wrote in part A part-to-part or part-to-whole ratios?

Part C

Write the ratio of seventh graders on the team to the total number of team members and the ratio of eighth graders on the team to the total number of team members.

The ratio of seventh graders on the team to the total number of team members is _____

The ratio of eighth graders on the team to the total number of team members is _____

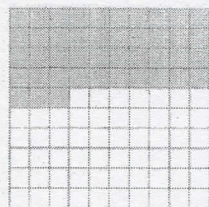
Part D

Are the ratios you wrote in part C part-to-part or part-to-whole ratios?

Part E

Which is greater: the ratio of seventh graders to the total number of team members, or the ratio of eighth graders to the total number of team members? Explain your reasoning.

Q2: The hundredths grid shown represents a whole.



Part A

Write the ratio of shaded squares to not shaded squares as a ratio and a fraction.

Ratio =

Fraction =

Part B

Write the number of shaded squares as a percent.

%

Part C

Is the percent of squares shaded a part-to-part or part-to-whole ratio?

Q3: Dayna has two equal buckets of paint the same shade of red. She adds white paint to Bucket 1. Which bucket will have a lighter shade of red, Bucket 1 or Bucket 2? Explain your answer.

Q4: Micah, Rose and Zoe all ran in a 5-mile race. Their running rates are shown in the table.

Runner	Rate
Micah	1 mile in 8 minutes
Rose	2.5 miles in 20 minutes
Zoe	4 miles in 32 minutes

Part A

Write each runner's rate as a fraction.

Runner	Rate
Micah	
Rose	
Zoe	

Part B

Which runner won the race?

Q5: Scale up or scale down each ratio to determine the unknown quantity. State whether you scaled up or scaled down the given ratio and explain how you determined each answer.

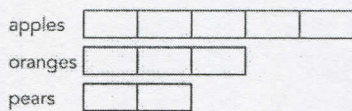
Part A

$$\frac{366 \text{ miles}}{6 \text{ hours}} = \frac{?}{1 \text{ hour}} \quad \boxed{}$$

Part B

$$\frac{5 \text{ green balls}}{7 \text{ yellow balls}} = \frac{?}{63 \text{ yellow balls}} \quad \boxed{}$$

Q6: The Fruit Basket sells variety bags of apples, oranges, and pears. The ratio of the fruit is always 5 apples: 3 oranges: 2 pears. A tape diagram representing the ratio of each type of fruit is shown.



Part A

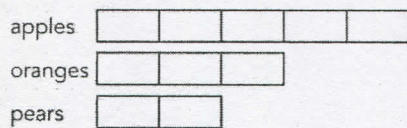
Describe what each small rectangle in the tape diagram represents.

Part B

What is the least total amount of fruit in a variety bag?

Part C

One of the variety bags has a total of 40 pieces of fruit. Use the tape diagram to determine how many of each type of fruit is in the bag.



Fruit	Number of fruits
Apples	
Oranges	
Pears	

Part D

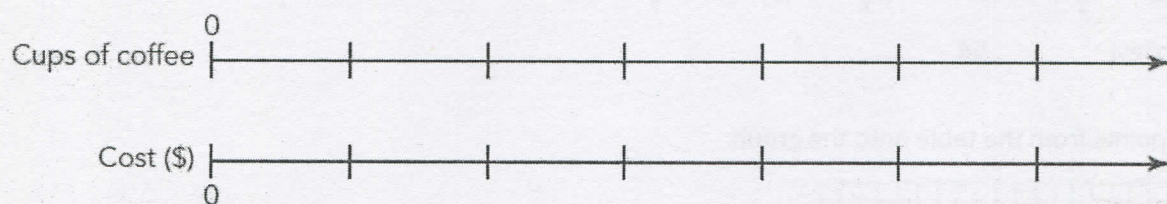
How many oranges are in a variety bag if there are 6 pears?

 oranges

Q7: Javaland sells a cup of coffee for \$2.50.

Part A

Complete the double number line.



Part B

How many cups of coffee can be purchased with \$10?

Part C

Ben wants to buy 7 cups of coffee for his office. He has \$18. Can he buy 7 cups of coffee? Explain your answer.

Part D

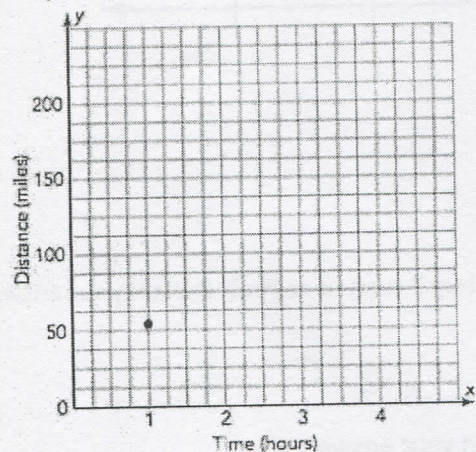
Can a person spend exactly \$12 on cups of coffee at Javaland? Explain your answer.

Q8: Ethan drove his car to his grandparents' house at a steady rate of 54 miles per hour.

a. The table shows the ratio time : distance. Complete the table.

Time (hours)	$\frac{1}{2}$	1	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3
Distance (miles)		54				

c. Plot your points from the table onto the graph.



d. If he continues driving at the same rate, how far will Ethan drive in 4 hours?

e. Driving at the same rate, how long will it take Ethan to drive 243 miles?

f. Draw a line through all the points you plotted on your graph. What do you notice?

g. Do all the points on the line you drew make sense in this problem situation? Why or why not?