

Ratios, Rates and Percent

1. The bakers at Healthy Bakery can make 340 bagels in 10 hours. How many bagels can they bake in 24 hours? What was that rate per hour?

_____ = number of bagels

_____ = number of bagels per hour

2. Gas mileage is the number of miles you can drive on a gallon of gasoline. A test of a new car results in 420 miles on 10 gallons of gas. How far could you drive on 55 gallons of gas? What is the car's gas mileage?

_____ = miles

_____ = miles per gallon

3. You can buy 3 apples at the Quick Market for \$1.05. You can buy 5 of the same apples at Stop and Save for \$1.10. Which place is the better buy? Select the correct answer.

☐

Quick Mart

☐

Stop and Save

4. You can buy 5 cans for green beans at the Village Market for \$2.60. You can buy 10 of the same cans of beans at Sam's Club for \$6.30. Which place is the better buy? Select the correct answer.

☐

Village Market

☐

Sam's Club

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5. An ice cream factory makes 140 quarts of ice cream in 10 hours. How many quarts could be made in 12 hours? What was that rate per day?

_____ = quarts

_____ = quarts per day

6. A ferris wheel can accommodate 65 people in 20 minutes. How many people could ride the ferris wheel in 5 hours? What was that rate per hour?

_____ = people

_____ = people per hour

7. A jet travels 460 miles in 2 hours. At this rate, how far could the jet fly in 9 hours? What is the rate of speed of the jet?

_____ = miles

_____ = miles per hour

8.

Which two recipes have equivalent ratios of cups of flour needed to the number of cookies?

Drag One Answer Here

Drag One Answer Here

Recipes	Cups of Flour Needed	Number of Cookies
Macadamia Nut	3	46
Chocolate Chip	4	48
Peanut Butter	2	28
Oatmeal Raisin	3	42

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9.

Which two types of cars have equivalent ratios of miles traveled to gallons of gas used? —

Cars	Miles Traveled	Gallons of Gas Used
Ford	64	4
Toyota	25	2
Lexus	48	3
Honda	27	3

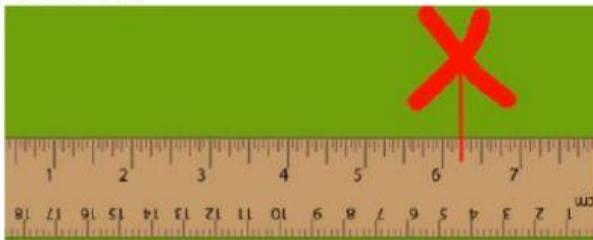
10.

Which two city parks have equivalent ratios of planted maple trees to the total number of trees in the park?

City Parks	Maple Trees Planted	Total Trees Planted
Eastern	14	126
North Ridge	24	214
West End	18	158
Central	23	207

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EXAMPLE



Percent error is how far off an estimate is from the actual answer, expressed as a percentage of the actual answer.

estimate: 6 inches

actual: 6.25 inches

$$6.25 - 6 = 0.25 \text{ inches}$$

$$\frac{0.25}{6.25} = \frac{x}{100}$$

$$6.25x = 0.25(100)$$

$$6.25x = 25$$

$$x = 4$$

4% error

11.

Roger has a nail that is 12 centimeters long. He measures and records the length of the nail as 15 centimeters. What is the percent error in Roger's measurement?

- ☐ A. 15%
- ☐ B. 17%
- ☐ C. 20%
- ☐ D. 25%

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12. Lydia bought a shirt at 20% off its retail price of \$40. She paid 5% tax on the price after the discount. How much did Lydia pay for the shirt?

☐ A. \$42

☐ B. \$36.60

☐ C. \$34

☐ D. \$33.60

13. If 10% of x is 20, what is 23% of x ?

☐ A. 33

☐ B. 46

☐ C. 200

☐ D. 230

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14. Mindy's dog, Rex, weighed 80 pounds a year ago. Now he weighs 92 pounds. What is the percent increase in his weight?
- ☐ A. 15%
 - ☐ B. 16%
 - ☐ C. 12%
 - ☐ D. 13%
15. At Jonathan's school, there are 30 seventh graders participating in the school play. Of the students in the seventh grade, 60% are not participating in the school play. How many seventh graders at Jonathan's school are not participating in the school play?
- ☐ A. 75
 - ☐ B. 60
 - ☐ C. 45
 - ☐ D. 20

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16. Renee is a sales associate at a store. She earns \$80 a week plus a 15% commission on her sales. Last week, she sold \$200 worth of items. What is the total amount Renee earned for the week? How much did she earn from commission?

Renee earned a total of \$ _____ for the week.

The amount she earned from commission was \$ _____.

17. Yesterday, the snow was 2 feet deep in front of Archie's house. Today, the snow depth dropped to 1.6 feet because the day is so warm. What is the percent change in the depth of the snow?

The percent change in the depth of snow from yesterday to today is _____%.