

Name: _____ Date: _____
7.RP.1

- C 1. A crew of highway workers paved $\frac{2}{15}$ mile in 20 minutes. If they work at the same rate, what portion of a mile will they pave in one hour? (2013)

$\frac{2}{15} \times \frac{(3)}{1} = \frac{6}{15} \div 3 = \frac{2}{5}$

- A. $\frac{1}{150}$ B. $\frac{2}{45}$ C. $\frac{2}{5}$ D. $\frac{5}{2}$

- B 2. The label on a $1\frac{1}{2}$ -pound bag of wildflower seeds states that it will cover an area of 375 square feet. Based on this information, what is the number of square feet that 1 pound of wildflower seeds will cover? (2014)

- A. $\frac{1}{250}$ B. 250 C. $562\frac{1}{2}$ D. 750

- C 3. Ms. Graves gave her class 12 minutes to read. Carrie read $5\frac{1}{2}$ pages in that time. At what rate, in pages per hour, did Carrie read? (2014)

$5(5.5) = 27.5$

- A. $1\frac{1}{10}$ B. 22 C. $27\frac{1}{2}$ D. 66

- B 4. A recipe requires $\frac{1}{3}$ cup of milk for each $\frac{1}{4}$ cup of water. How many cups of water are needed for each cup of milk? (2015)

Unit rate $\frac{W}{M} = \frac{1/4}{1/3} = \frac{3}{4}$

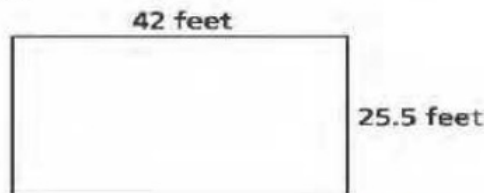
- A. $\frac{1}{12}$ B. $\frac{3}{4}$ C. $\frac{11}{12}$ D. $1\frac{1}{3}$

- A 5. Gary buys a $3\frac{1}{2}$ -pound bag of cat food every 3 weeks. Gary feeds his cat the same amount of food each day. Which expression can Gary use to determine the number of pounds of cat food his cat eats each year? (1 year = 52 weeks) (2015)

$3\frac{1}{2} \rightarrow \frac{7}{2}$

- A. $\frac{7}{2} \times \frac{52}{3}$ B. $\frac{7}{2} \times \frac{3}{52}$ C. $3(\frac{1}{2} \times \frac{3}{52})$ D. $3(\frac{1}{2} \times \frac{52}{3})$

- B 6. Wallpaper was applied to one rectangular wall of a large room. The dimensions of the wall are shown below. (2016)



If the total cost of the wallpaper was \$771.12, what was the cost, in dollars, of the wallpaper per square foot?

- A. \$0.61 B. \$0.72 C. \$1.39 D. \$1.65

$\frac{\text{Cost}}{\text{Area}} = \frac{771.12}{(42)(25.5)} = \frac{771.12}{1071}$

- C 7. A recycling plant processes an average of $\frac{1}{3}$ ton of glass each minute. At approximately what rate does the recycling plant process glass, n tons per day? (1 day = 24 hours) (2016)

$$\frac{1}{3} \left(\frac{1440}{1} \right) = \frac{1440}{3} \quad \frac{60 \text{ min}}{1 \text{ hr}} \cdot \frac{24 \text{ hrs}}{1 \text{ day}} = 1440 \frac{\text{min}}{\text{day}}$$

A. 20 B. 180 C. 480 D. 4,320

- C 8. A vehicle uses $1\frac{1}{4}$ gallons of gasoline to travel $13\frac{1}{2}$ miles. At this rate, how many miles can the vehicle travel per gallon of gasoline? (2017)

$$\frac{M}{G} \quad \frac{13.5}{1.125} =$$

A. $\frac{16}{243}$ B. $\frac{4}{3}$ C. 12 D. 13

- A 9. In the morning, a farm worker packed 3 pints of strawberries every 4 minutes. In the afternoon, she packed 2 pints of strawberries every 3 minutes. What was the difference between her morning and afternoon packing rates, in pints per hour? (2017) no calculator

$$\frac{3 \text{ pints}}{4 \text{ min}} \left(\frac{60 \text{ min}}{1 \text{ hr}} \right) = 45$$

B. 10

C. 40 $45 - 40$

D. 45

$$\frac{2}{3}(60) = 40$$

- C 10. Nick is making bread dough. (2018)

- The recipe requires $\frac{3}{4}$ cup of flour and $1\frac{1}{8}$ teaspoons of salt.
- Nick wants to make the recipe using 1 cup of flour.

$$\frac{S}{F} \quad \frac{1\frac{1}{8}}{3/4}$$

To maintain the ratio, how much salt is required when 1 cup of flour is used?

A. $\frac{27}{32}$ teaspoon B. $\frac{2}{3}$ teaspoon C. $1\frac{1}{2}$ teaspoons D. $1\frac{7}{8}$ teaspoons

11. A pine tree measured $40\frac{1}{2}$ feet tall. Over the next $7\frac{1}{2}$ years, it grew to a height of 57 feet. During the $7\frac{1}{2}$ years, what was the average yearly growth rate of the height of the tree?

Show your work.

(2013)

$$\frac{57 - 40.5}{7.5} = \frac{16.5}{7.5}$$

Answer 2.2 feet per year