

For each word problem, set up a proportion to solve.

1) The science club washes 30 cars in 45 minutes. At this rate, how many cars can they wash in 60 minutes?

$$\frac{\text{cars}}{\text{min}}$$

~~$$\frac{30}{45} = \frac{x}{60}$$~~

$$\frac{45x}{45} = \frac{1800}{45}$$

$$x = 40 \text{ cars}$$

2) You can buy 5 stickers for \$3. Write a proportion that gives the cost c if you buy 12 stickers.

$$\frac{\text{stickers}}{\text{\$}}$$

~~$$\frac{5}{3} = \frac{12}{c}$$~~

$$\frac{\$c}{5} = \frac{36}{5}$$

$$c = \$7.20$$

3) A family went on vacation and used 5.4 gallons of gasoline to travel 150 miles. How many total gallons of gasoline will they need to travel 350 miles?

$$\frac{\text{gal}}{\text{mi.}}$$

~~$$\frac{5.4}{150} = \frac{x}{350}$$~~

$$\frac{150x}{150} = \frac{1890}{150}$$

$$x = 12.6 \text{ gallons}$$

4.) The label on a $1\frac{1}{2}$ pound bag of wildflower seeds states that it will cover an area of 375 sq. ft. How many sq. ft would a 1 pound bag of wildflower seeds will cover?

A. $\frac{1}{250}$

B. 250

C. $562\frac{1}{2}$

D. 750

$$\frac{1 \text{ lb.}}{\text{sq. ft}}$$

~~$$\frac{1.5}{375} = \frac{1}{x}$$~~

$$\frac{1.5x}{1.5} = \frac{375}{1.5}$$

$$x = 250$$

Rates and Ratio Questions

5.) A convenience store sells two brands of orange juice. Brand A contains 8 fluid ounces and costs \$1.28. Brand B contains 12 fluid ounces and costs \$1.68.

a.) Which is the better buy?

$$\frac{\$1.28}{8 \text{ oz.}}$$

$$\$0.16 \text{ per oz.}$$

$$\frac{\$1.68}{12 \text{ oz.}}$$

$$\$0.14 \text{ per oz.}$$

Better Buy

b.) What is the difference in cost per fluid ounce between the two brands?

$$\$0.02 \text{ difference}$$

6.) Which of the following tables does *not* represent a proportional relationship between time and distance traveled?

A.

Time(hrs)	2	3	5
Distance(mi)	120	180	300

B.

Time(hrs)	5	10	20
Distance(mi)	200	400	800

C.

Time(hrs)	5	9	11
Distance(mi)	325	585	715

D.

Time(hrs)	2	3	7
Distance(mi)	90	135	310

$$\frac{\text{mi}}{\text{hr}}$$

$$45 \text{ mph}$$

$$45 \text{ mph}$$

$$44.2 \dots \text{ mph}$$