

6-5 Solving Proportions

Ex. 1

Solve:

$$\frac{x}{6} = \frac{2}{5}$$

$$x = 2.4$$

$$\frac{3}{10} = \frac{y-2}{6}$$

$$y-2 = 1.8$$

$$y = 3.8$$

Ex. 2 2 out of 5 college students don't get enough sleep.
Out of 460 college students, how many need more sleep?

$$\frac{2}{5} = \frac{x}{460}$$

not enough sleep total

total

184

Ex. 3 17 trees are saved for every 2000 pounds of paper that are recycled. How many trees would be saved if OHS recycled 5000 pounds of paper?

$$\frac{17 \text{ trees}}{2000 \text{ paper}} = \frac{x}{5000 \text{ paper}}$$

x = 42.5 trees

Ex. 4

A recipe for cookies calls for 3.5 cups of flour and 0.75 cups of sugar. If you have only 2 cups of flour, how much sugar should you use?

$$\frac{3.5 \text{ flour}}{.75 \text{ sugar}} = \frac{2 \text{ flour}}{x}$$

.4 cups of sugar

Ex. 5

9 out of 10 high school students have a cell phone. If there are 1035 OHS students with a cell phone, how many total students are at OHS?

$$\frac{9 \text{ cell phone}}{10 \text{ total}} = \frac{1035 \text{ cell phone}}{x}$$

1150 students

Ex. 6 At a sale you can buy 3 books for \$4.00. How many books can you buy for \$52?

~~$$\frac{3 \text{ books}}{\$4} = \frac{\$52}{x}$$~~

$$4x = 52 \cdot 3$$

$$x = 39 \text{ books}$$

Ex. 7 A snow blower uses 2 gallons of gasoline to clear 1200 feet of sidewalk. How many gallons are needed to clear 3000 feet of sidewalk?

$$\frac{2}{1200} = \frac{5}{3000}$$