1. If a jogger runs 2 miles and burns 185 calories, how many calories would he burn jogging 3 miles?

$$\boxed{\frac{\text{Calories burned}}{\text{miles jogged}}}$$

$$(3)\,\frac{185}{2} = \frac{x}{3}\,(3)$$

$$277.5 = x$$

They will burn 277.5 calories jogging 3 miles

2. The ratio of the cost of a tennis racket to tennis balls is 18:1. If a can of balls cost $5.35, what is the cost of the racket?

$$\boxed{\frac{\text{cost of racket}}{\text{cost of balls}}}$$

$$(5.35)\,\frac{18}{1} = \frac{x}{5.35}\,(5.35)$$

$$96.3 = x$$

It will cost $96.30 for a tennis racket.

3. Curtis School has 1,575 students. The student to teacher ratio is 15 to 1. How many teachers are at Curtis School?

$$\boxed{\frac{\#\text{ of teachers}}{\#\text{ of students}}}$$

$$(1575)\,\frac{1}{15} = \frac{x}{1575}\,(1575)$$

$$105 = x$$

There are 105 teachers at Curtis School

4. A recipe calls for 2 ½ cups of flour to make 2 dozen cookies. How many cups of flour would be required to bake 15 dozen cookies?

$$\boxed{\frac{\text{cups of flour}}{\text{dozen cookies}}}$$

$$(15)\,\frac{2.5}{2} = \frac{x}{15}\,(15)$$

$$18.75 = x$$

You need 18.75 cups of sugar to make 15 dozen cookies.

5. A meteorologist reports that the ratio of snowfall in January to total snowfall during the average winter is 2 to 5. If 34 inches have fallen in January of the current year, find the predicted total snowfall for the entire winter.

$$\boxed{\frac{\text{Total year snowfall}}{\text{January snowfall}}}$$

$$(34)\,\frac{5}{2} = \frac{x}{34}\,(34)$$

$$85 = x$$

85 inches of snow would be predicted for the year.

6. Because of slumping sales, a small company had to lay off some of its employees. The ratio of total employees to employees laid off is 5 to 1. Find the total number of employees if 22 are laid off.

$$\frac{\text{Total \# of employees}}{\text{\# laid off}}$$

$$(22)\frac{5}{1} = \frac{x}{22}(22)$$

$$110 = x$$

There are 110 total employees.

7. A crew of loggers cleared ½ acre of lumber in 4 days. How long will it take the same crew to clear 2 ¾ acres of lumber?

$$\frac{\text{\# of days}}{\text{acres}}$$

$$(2.75)\frac{4}{0.5} = \frac{x}{2.75}(2.75)$$

$$22 = x$$

It will take 22 days to clear 2.75 acres.

8. A person who weighs 200 pounds on Earth would weigh about 32 pounds on the moon. Find the weight of a person on Earth who would weigh 15 pounds of the moon.

$$\frac{\text{wt. on Earth}}{\text{wt. on Moon}}$$

$$(15)\frac{200}{32} = \frac{x}{15}(15)$$

$$93.75 = x$$

They would weigh 93.75 lbs. on Earth.

9. A pump can fill a 750-gallon tank in 35 minutes. How long will it take to fill a 1000-gallon tank with this same pump?

$$\frac{\text{minutes}}{\text{gallons}}$$

$$(1000)\frac{35}{750} = \frac{x}{1000}(1000)$$

$$46.7 = x$$

It will take 46.7 minutes to fill the 100 gallon tank.

10. In a public opinion poll, 624 people from a sample of 1,100 indicated they would vote for a specific candidate. How many votes can the candidate expect to receive from a population of 40,000?

$$\frac{\text{\# of vote}}{\text{\# of people}}$$

$$(40,000)\frac{624}{1100} = \frac{x}{40,000}(40,000)$$

$$22,690.9 = x$$

They could expect 22,691 votes.