

Review Exercise Set 29
Solve using the proportion method

Exercise 1: 23% of 330 is what?

Exercise 2: 375 is what percent of 1500?

Exercise 3: What is 170% of 143?

Exercise 4: Bill purchased a computer monitor for \$199.99. This is 40% of the cost of the monitor 3 years ago. What was the cost of the monitor 3 years ago?

Exercise 5: The retail price for a software program is \$129. However, since Kent is an employee at a community college he can buy the same program at the academic price of \$99. What percent of the retail price is the academic price? Round to the nearest hundredth of a percent.

Review Exercise Set 29 Answer Key

Exercise 1: 23% of 330 is what?

Convert 23% into fraction form: $\frac{23}{100}$

Let x = the unknown part of 330

Setup the proportion

$$\frac{23}{100} = \frac{x}{330}$$

Solve for x

$$100 \times x = 23 \times 330$$

$$100x = 7590$$

$$\frac{100x}{100} = \frac{7590}{100}$$

$$x = 75.9$$

75.9 is 23% of 330

Exercise 2: 375 is what percent of 1500?

Let x = the unknown percent

Express percentage in fraction form: $\frac{x}{100}$

Setup the proportion

$$\frac{375}{1500} = \frac{x}{100}$$

Solve for x

$$1500 \times x = 375 \times 100$$

$$1500x = 37500$$

$$\frac{1500x}{1500} = \frac{37500}{1500}$$

$$x = 25$$

The percentage would be 25%.

Exercise 3: What is 170% of 143?

Let x = unknown part of 143

Convert 170% into fraction form: $\frac{170}{100}$

Setup the proportion

$$\frac{170}{100} = \frac{x}{143}$$

Solve for x

$$\begin{aligned}\frac{170}{100} &= \frac{x}{143} \\ 100 \times x &= 170 \times 143 \\ 100x &= 24310 \\ \frac{100x}{100} &= \frac{24310}{100} \\ x &= 243.1\end{aligned}$$

243.1 is 170% of 143.

Exercise 4: Bill purchased a computer monitor for \$199.99. This is 40% of the cost of the monitor 3 years ago. What was the cost of the monitor 3 years ago?

Let x = cost of monitor 3 years ago

Convert 40% into fraction form: $\frac{40}{100}$

Since the \$199.99 is 40% of x , the x would be the base and go in the denominator of the fraction.

$$\begin{aligned}\frac{40}{100} &= \frac{199.99}{x} \\ 100 \times 199.99 &= 40 \times x \\ 19999 &= 40x \\ \frac{19999}{40} &= \frac{40x}{40} \\ 499.975 &= x\end{aligned}$$

The cost of the monitor 3 years ago was \$499.98.

Exercise 5: The retail price for a software program is \$129. However, since Kent is an employee at a community college he can buy the same program at the academic price of \$99. What percent of the retail price is the academic price? Round to the nearest hundredth of a percent.

Let x = the unknown percentage

The percentage expressed in fraction form would be: $\frac{x}{100}$

Ratio of academic price to the retail price: $\frac{99}{129}$

$$\frac{99}{129} = \frac{x}{100}$$

$$129 \times x = 99 \times 100$$

$$129x = 9900$$

$$\frac{129x}{129} = \frac{9900}{129}$$

$$x = 76.744$$

The academic price is 76.74% of the retail price.