

Display Master: Key Ideas: Applying Proportionality to Percents

- A percent is an amount out of 100. For example, if red beads make up 35% of the total beads, 35 beads out of every 100 are red.
- A ratio comparing 2 amounts can be set equivalent to a ratio with a denominator of 100 to determine a percentage. For example, the proportion

$$\frac{3 \text{ cats}}{4 \text{ total animals}} = \frac{x \text{ cats}}{100 \text{ total animals}}$$

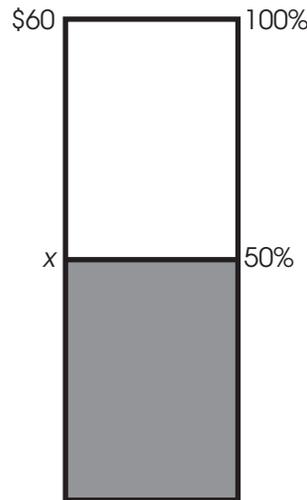
can be used to find the percentage of cats, or the number of cats for every 100 total animals.

Display Master: Jeans A

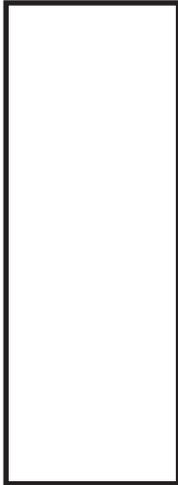
The original price of a pair of jeans is \$60. The pair of jeans is on sale for 50% off. If you bought the jeans, how much money would you save?

Display Master: Jeans B

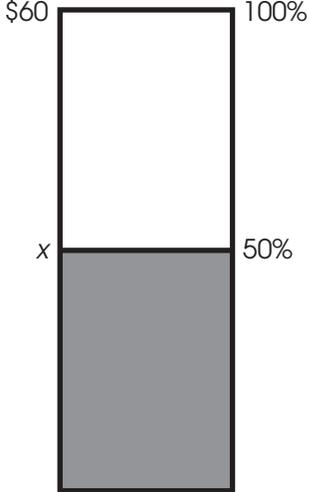
The original price of a pair of jeans is \$60. The pair of jeans is on sale for 50% off. If you bought the jeans, how much money would you save?



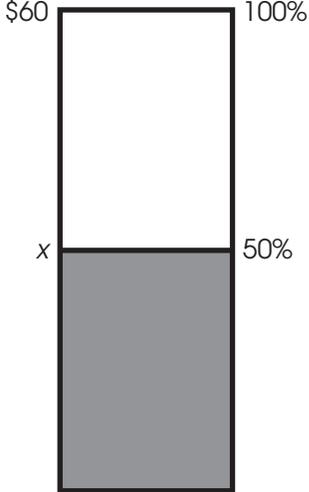
Display Master: Jeans C

Percent Bar Model	Given Information	Set Up Proportion and Solve
	<p>Part =</p> <p>Whole =</p> <p>Percent =</p>	$\frac{\text{Part}}{\text{Whole}} = \frac{\text{Percent}}{100}$ <hr style="width: 100%;"/> <p style="text-align: center;">=</p>

Display Master: Jeans D

Percent Bar Model	Given Information	Set Up Proportion and Solve
	<p>Part = x</p> <p>Whole = \$60</p> <p>Percent = 50%</p>	$\frac{\text{Part}}{\text{Whole}} = \frac{\text{Percent}}{100}$ $\frac{x}{60} = \frac{50}{100}$

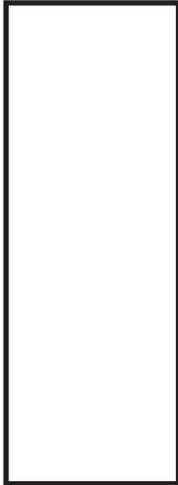
Display Master: Jeans E

Percent Bar Model	Given Information	Set Up Proportion and Solve
	<p>Part = x</p> <p>Whole = \$60</p> <p>Percent = 50%</p>	$\frac{\text{Part}}{\text{Whole}} = \frac{\text{Percent}}{100}$ $\frac{x}{60} = \frac{50}{100}$ $3,000 = 100x$ $\frac{3,000}{100} = \frac{100x}{100}$ $x = \$30$

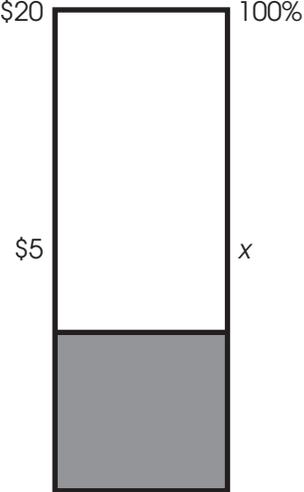
Display Master: Shirt A

The original price of a shirt is \$20. The shirt is on sale for \$5 off. What percent of the original price is the amount saved?

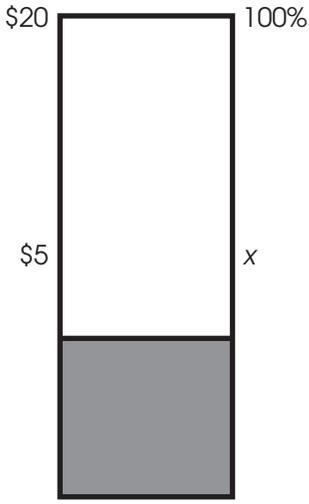
Display Master: Shirt B

Percent Bar Model	Given Information	Set Up Proportion and Solve
	<p>Part =</p> <p>Whole =</p> <p>Percent =</p>	$\frac{\text{Part}}{\text{Whole}} = \frac{\text{Percent}}{100}$ <hr style="width: 100%;"/>

Display Master: Shirt C

Percent Bar Model	Given Information	Set Up Proportion and Solve
 <p>A vertical bar model representing 100%. The total height is labeled \$20 and 100%. A shaded portion at the bottom is labeled \$5 and x.</p>	<p>Part = \$5 Whole = \$20 Percent = x</p>	$\frac{\text{Part}}{\text{Whole}} = \frac{\text{Percent}}{100}$ $\frac{5}{20} = \frac{x}{100}$

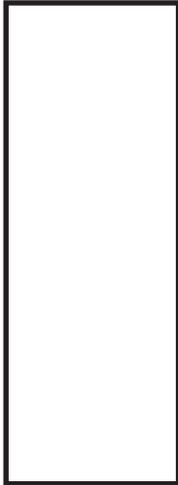
Display Master: Shirt D

Percent Bar Model	Given Information	Set Up Proportion and Solve
	<p>Part = \$5 Whole = \$20 Percent = x</p>	$\frac{\text{Part}}{\text{Whole}} = \frac{\text{Percent}}{100}$ $\frac{5}{20} = \frac{x}{100}$ <p style="text-align: center;"> $\xrightarrow{\times 5}$ $\xleftarrow{\times 5}$ </p> $5 \times 5 = x$ $25\% = x$

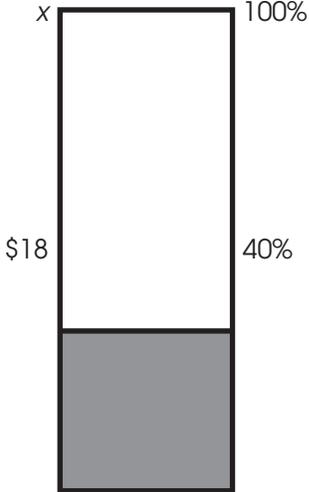
Display Master: Bathing Suit A

A bathing suit is on sale for 40% off. With the sale, you will save \$18. What is the original price of the bathing suit?

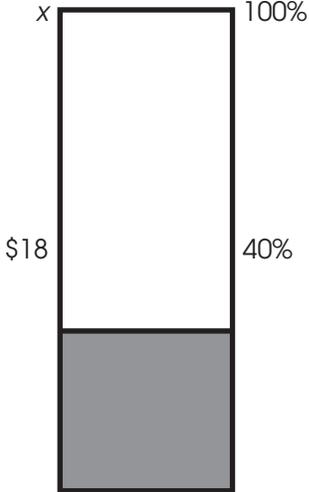
Display Master: Bathing Suit B

Percent Bar Model	Given Information	Set Up Proportion and Solve
	<p>Part =</p> <p>Whole =</p> <p>Percent =</p>	$\frac{\text{Part}}{\text{Whole}} = \frac{\text{Percent}}{100}$ <hr style="width: 100%;"/> <hr style="width: 100%;"/>

Display Master: Bathing Suit C

Percent Bar Model	Given Information	Set Up Proportion and Solve
	<p>Part = \$18</p> <p>Whole = x</p> <p>Percent = 40%</p>	$\frac{\text{Part}}{\text{Whole}} = \frac{\text{Percent}}{100}$ $\frac{18}{x} = \frac{40}{100}$

Display Master: Bathing Suit D

Percent Bar Model	Given Information	Set Up Proportion and Solve
	<p>Part = \$18</p> <p>Whole = x</p> <p>Percent = 40%</p>	$\frac{\text{Part}}{\text{Whole}} = \frac{\text{Percent}}{100}$ $\frac{18}{x} = \frac{40}{100}$ $\frac{40x}{40} = \frac{1,800}{40}$ $x = \$45$