

ANSWERS

PERCENT PROPORTION

Solve each problem by writing and solving a proportion. Show all steps and round your answer to the nearest tenth if necessary.

Steps to Solve a Proportion

1. Set up the Proportion: Write the two ratios as fractions equal to each other. $\frac{A}{B} = \frac{C}{D}$
2. Cross-Multiply: Multiply diagonally across the equal's sign. $A \times D = B \times C$
3. Solve for the Variable: Divide to find the unknown value. Unknown: $\frac{\text{Product of Known Values}}{\text{Other Known Value}}$
4. Round: Round your answer to the nearest tenth if needed.

a) 18% of 400 people at a concert are children. How many children are at the concert?

Solution:

1. Set up the proportion: $\frac{18}{100} = \frac{x}{400}$
2. Cross-multiply: $18 \times 400 = 100 \times x$
3. Solve for the Variable: $7200 = 100x \Rightarrow \frac{7200}{100} \Rightarrow x = 72$
4. Answer: **There are 72 children at the concert.**

b) 22% of 90 books in a library are non-fiction. How many non-fiction books are in the library?

Solution:

1. Set up the proportion: $\frac{22}{100} = \frac{x}{90}$
2. Cross-multiply: $22 \times 90 = 100 \times x$
3. Solve for the Variable: $1980 = 100x \Rightarrow \frac{1980}{100} \Rightarrow x = 19.8$
4. Answer: **There are 19.8 (approximately 20) non-fiction books in the library.**

c) 35% of 140 people in a survey prefer tea over coffee. How many people prefer tea?

Solution:

1. Set up the proportion: $\frac{35}{100} = \frac{x}{140}$
2. Cross-multiply: $35 \times 140 = 100 \times x$
3. Solve for the Variable: $4900 = 100x \Rightarrow \frac{4900}{100} \Rightarrow x = 49$
4. Answer: **49 people prefer tea over coffee.**

How Did You Do? 😊 😐 😞