

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) 25% of a 200-liter tank is full. How many liters are in the tank?

Solution:

1. Set up the proportion: $\frac{25}{100} = \frac{x}{200}$
2. Cross-multiply: $25 \times 200 = 100 \times x$
3. Solve for the Variable: $5000 = 100x \Rightarrow \frac{5000}{100} \Rightarrow x = 50$
4. Answer: **There are 50 liters in the tank.**

b) 60% of the 300 passengers on a plane are adults. How many adults are on the plane?

Solution:

1. Set up the proportion: $\frac{60}{100} = \frac{x}{300}$
2. Cross-multiply: $60 \times 300 = 100 \times x$
3. Solve for the Variable: $18000 = 100x \Rightarrow \frac{18000}{100} \Rightarrow x = 180$
4. Answer: **There are 180 adults on the plane.**

c) 10% of a population of 5000 people are children. How many children are in the population?

Solution:

1. Set up the proportion: $\frac{10}{100} = \frac{x}{5000}$
2. Cross-multiply: $10 \times 5000 = 100 \times x$
3. Solve for the Variable: $50000 = 100x \Rightarrow \frac{50000}{100} \Rightarrow x = 500$
4. Answer: **There are 500 children in the population.**

How Did You Do? 😊 😐 😞