

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) 15% of 320 employees in a company received a performance bonus. How many employees received a performance bonus?

Solution:

1. Set up the proportion: $\frac{15}{100} = \frac{x}{320}$
2. Cross-multiply: $15 \times 320 = 100 \times x$
3. Solve for the Variable: $4800 = 100x \Rightarrow \frac{4800}{100} \Rightarrow x = 48$
4. Answer: **48 employees received a performance bonus.**

b) 25% of 400 houses in a neighborhood have solar panels installed. How many houses have solar panels installed?

Solution:

1. Set up the proportion: $\frac{25}{100} = \frac{x}{400}$
2. Cross-multiply: $25 \times 400 = 100 \times x$
3. Solve for the Variable: $10000 = 100x \Rightarrow \frac{10000}{100} \Rightarrow x = 100$
4. Answer: **100 houses have solar panels installed.**

c) 18% of 350 participants in a marathon are from out of town. How many participants are from out of town?

Solution:

1. Set up the proportion: $\frac{18}{100} = \frac{x}{350}$
2. Cross-multiply: $18 \times 350 = 100 \times x$
3. Solve for the Variable: $6300 = 100x \Rightarrow \frac{6300}{100} \Rightarrow x = 63$
4. Answer: **63 participants are from out of town.**

How Did You Do? 😊 😐 😞