

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) 50% of the 20 students in an art club prefer painting. How many students prefer painting?

Solution:

1. Set up the proportion: $\frac{50}{100} = \frac{x}{20}$
2. Cross-multiply: $50 \times 20 = 100 \times x$
3. Solve for the Variable: $1000 = 100x \Rightarrow \frac{1000}{100} \Rightarrow x = 10$
4. Answer: **10 students prefer painting.**

b) 20% of 150 students in a school are in the band. How many students are in the band?

Solution:

1. Set up the proportion: $\frac{20}{100} = \frac{x}{150}$
2. Cross-multiply: $20 \times 150 = 100 \times x$
3. Solve for the Variable: $3000 = 100x \Rightarrow \frac{3000}{100} \Rightarrow x = 30$
4. Answer: **There are 30 students in the band.**

c) 45% of 220 voters support a new policy. How many voters support the policy?

Solution:

1. Set up the proportion: $\frac{45}{100} = \frac{x}{220}$
2. Cross-multiply: $45 \times 220 = 100 \times x$
3. Solve for the Variable: $9900 = 100x \Rightarrow \frac{9900}{100} \Rightarrow x = 99$
4. Answer: **99 voters support the policy.**

How Did You Do? 😊 😐 ☹️