

Proportion and Percent

A proportion is a part in relation to the whole. It is often necessary to represent the part as a percentage.

Example: If you got 17 questions correct on a 20 question test, what was the percentage you got correct? To obtain the percentage, divide 17 by 20 and move the decimal point to the right by 2 places: $17 \div 20 = 0.85$ Move the decimal point two places to the right and append the percent symbol: $0.85 = 85\%$

Find the percentage for the proportions given in the word problems below.

1. Jim got 30 questions correct out of a total of 35. What was the percentage he got correct? _____
2. Jack's truck had used 30 gallons of fuel from a 50 gallon tank. What percentage was used? _____
3. Fred's sporting goods is providing a \$5.00 discount on a bicycle that costs \$80.00. What is the percentage of the discount? _____
4. The state of Colorado has 7 representatives in the U.S. House of Representatives. There are a total 435 representatives. What is the percentage of Colorado's representation?

5. Debbie's house is 8 miles from Sally's house. Sally has ridden 5 miles towards Debbie's house. What is the percentage of the total distance she has ridden? _____
6. Records show that 3 out of 4 families move about every 5 years. What is the percentage of families that move every 5 years? _____
7. On a recent bill, 73 out of the 100 U.S. Senators voted for approval. What was the percentage that voted for approval? _____
8. A company that builds computers found that 1 out of every 200 computers had a defective keyboard. What is the percentage of defective keyboards? _____
9. In order to get an A in the class, Jane needs to get at least 90% of the questions on the final test correct. If Jane got 55 out of the 60 questions correct, would she have the 90% needed for her to get an A in the class? _____
10. A room that with an area of 300 square feet is being tiled. If 200 of the 300 square feet are complete, what is the completed percentage? _____

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Example: If you got 17 questions correct on a 20 question test, what was the percentage you got correct? To obtain the percentage, divide 17 by 20 and move the decimal point to the right by 2 places: $17 \div 20 = 0.85$ Move the decimal point two places to the right and append the percent symbol: $0.85 = 85\%$

Find the percentage for the proportions given in the word problems below.

1. Jim got 30 questions correct out of a total of 35. What was the percentage he got correct? **85.7%**
2. Jack's truck had used 30 gallons of fuel from a 50 gallon tank. What percentage was used? **60%**
3. Fred's sporting goods is providing a \$5.00 discount on a bicycle that costs \$80.00. What is the percentage of the discount? **6.2%**
4. The state of Colorado has 7 representatives in the U.S. House of Representatives. There are a total 435 representatives. What is the percentage of Colorado's representation? **1.6%**
5. Debbie's house is 8 miles from Sally's house. Sally has ridden 5 miles towards Debbie's house. What is the percentage of the total distance she has ridden? **62.5%**
6. Records show that 3 out of 4 families move about every 5 years. What is the percentage of families that move? **75%**
7. On a recent bill, 73 out of the 100 U.S. Senators voted for approval. What was the percentage that voted for approval? **73%**
8. A company that builds computers found that 1 out of every 200 computers had a defective keyboard. What is the percentage of defective keyboards? **0.5%**
9. In order to get an A in English class, Jane needs to get at least 90% of the questions on the final test correct. If Jane got 55 out of the 60 questions correct, would she have the 90% needed for her to get an A in her English class? **Yes, 91.6%**
10. A room with an area of 300 square feet is being tiled. If 200 of the 300 square feet are complete, what is the completed percentage? **66.5%**