Percent of a Number

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| What is a percent? | A percent is a part of 100. |
| How do I find a | There are 2 ways to find the percent of a number. |
| percent of a number? | 1) set up and solve a proportion |
| | 2) convert percent to a decimal and multiply |
| | , |
| Example 1: Using a | Find the 67% of 90 |
| proportion | |
| | First set up a proportion with 67 as the numerator and |
| | 100 as the denominator. Since we want to find part of |
| | 90, then 90 represents the 100% of the other ratio. |
| | 5 0, 021012 5 0 1 0 p 2 0 0 0 1210 1 0 0 0 0 1 0 1 0 1 0 1 0 |
| | 67 X |
| | $\frac{67}{100} = \frac{x}{90}$ |
| | 100 90 |
| | *important to note that when using a proportion, the % sign is no |
| | longer needed* |
| | After solving the proportion, $x = 60.3$ therefore |
| | 67% of 90 is 60.3. |
| | |
| Does my answer | Since 67% is more than half, we should expect an |
| make sense? | answer more than half of 90 (which is 45). Also, since |
| | 90 is close to 100, we should also expect an answer |
| | close to 67. |
| Example 2: Using a | Find 145% of 210 |
| proportion | |
| | Just like in example 1, set up a proportion with the |
| | percent out of 100, and the 210 as the other |
| | denominator. |
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| | |
| | After setting up the proportion, solve to find x. |
| | x = 304.5 therefore |
| | 145% of 210 is 304.5. |
| | |
| | Does your answer make sense? How do you know? |
| Example 3: Using | Find 8% of 50 |
| decimals equivalents | |
| | First convert 8% to a decimal. Then multiply the |
| | decimal by 50. |
| | |
| | 8% = 0.08. |
| | $0.08 \cdot 50 = 4$ |
| | 8% of 50 is 4. |
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| Does my answer make sense? Example 4: Using decimal equivalents | Since 8% is less than 10%, we know that the answer should be small. We also know that 8% of 100 is 8, so it makes sense that our answer is half since 50 is half of 100. Yes, our answer make sense. Find 0.5% of 36 Just like in example 3, convert the percent to a decimal. Then multiply the decimal times 36. |
|--|--|
| | 0.5% = |
| | Does your answer make sense? How do you know? |
| You try using either method | a. Find 3% of 12 |
| | b. Find 9% of 80 |
| Real World Application | Earth's total land area is about 57,308,738 square miles. The land of Asia is about 30% of this total. What is the approximate land area of Asia to the nearest square mile? (Use either method but show your work) |
| Real World Application | The estimated world population in 2001 was 6,157 million. About 40% of the people were 19 or younger. What was the approximate number of people 19 or younger to the nearest million? (Use either method but show your work) |