Percent of a Number

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| What is a percent? | A percent is a part of 100. |
| How do I find a percent of a number? | There are 2 ways to find the percent of a number.1) set up and solve a proportion2) convert percent to a decimal and multiply |
| Example 1: Using a proportion | Find the 67% of 90First 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.$$\frac{67}{100}=\frac{x}{90}$$\*important to note that when using a proportion, the % sign is no longer needed\*After solving the proportion, x = 60.3 therefore67% of 90 is 60.3. |
| Does my answer make sense? | Since 67% is more than half, we should expect an 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 proportion | Find 145% of 210Just like in example 1, set up a proportion with the percent out of 100, and the 210 as the other denominator. 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 decimals equivalents | Find 8% of 50First convert 8% to a decimal. Then multiply the decimal by 50.8% = 0.08. 0.08 ∙ 50 = 48% of 50 is 4.  |
| Does my answer make sense? | 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. |
| Example 4: Using decimal equivalents | Find 0.5% of 36Just like in example 3, convert the percent to a decimal. Then multiply the decimal times 36.0.5% =\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ∙ 36 =Does your answer make sense? How do you know?  |
| You try using either method | a. Find 3% of 12b. 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) |