What Percentage...?

What percentage of a 15-ft tree is a 3-ft sapling?	A choir has 22 women and 18 men. **Find what percentage** of the choir's members are men.	One pair of jeans costs $25 and the other costs $28. **How many percent** is the price of cheaper jeans of the price of the more expensive jeans?

Look carefully at the questions above. Notice that the problems do *not* tell you the percentage; there is NO number in the problem indicating x%. Instead, they ask you just that!

Questions of "What percentage...?" or "How many percent ...?" or "What percentage...?"

Asking "What percentage?" or "How many percent?" is the same as asking "How many hundredth parts?"

We can solve these questions in a two-part process:

1. First find out the part that is being asked for *as a fraction*. The denominator probably won't be 100.
2. Convert that fraction to a decimal. Then you can easily convert the decimal to a percentage!

Example. A choir has 22 women and 18 men. Find what percentage of the choir's members are men.

1. Find out *what part* (fraction) of the choir's members are men. That is 18/40, or 9/20.
2. Write 9/20 as a percent. We use equivalent fractions: 9/20 = 45/100 = 45%.

Example. One pair of jeans costs $25 and the other costs $28.
How many percent is the price of cheaper jeans of the price of the more expensive jeans?

1. Write what part the cheaper price is of the more expensive price. The answer is 25/28.
2. Write 25/28 as a percentage. From a calculator, 25/28 = 0.892857142857143.
   Rounded to a whole percent, this is 89%.

1. **a.** What percentage of a 15-ft tree is a little 3-ft sapling?

   b. How many percent is $12 of $16?

2. Find how many percent the smaller object's height is of the taller object's height.

6 m 8 m

a.

300 cm 120 cm

b.

4 m 5 m

c.