Percentages (%)

When you say "Percent" you are really saying "per 100"

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| --- | --- | --- | --- | --- |
| 50% | So **50%** means 50 per 100 (50% of this box is green) |  | And **25%** means 25 per 100 (25% of this box is green) | 25% |
|  |  |  |

Examples:

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| --- | --- | --- |
| 100% |  | 100% means all.  Example:  100% of **80** is **100**/**100** × 80 = 80 |
| 50% |  | 50% means half.  Example:  50% of **80** is **50**/**100** × 80 = 40 |
| 5% |  | 5% means **5**/**100ths**.  Example:  5% of **80** is **5**/**100** × 80 = 4 |

|  |  |
| --- | --- |
|  | Using Percent  Because "Percent" means "per 100" think:  "this should be divided by 100"  So **75%** really means 75/100  And **100%** is 100/100, or exactly **1**(100% of any number is just the number, unchanged)  And **200%** is 200/100, or exactly **2**(200% of any number is twice the number) |

A **Percent** can also be expressed as a ***Decimal*** or a***Fraction***

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| http://www.mathsisfun.com/images/fractions/pie-1-2.jpg |  | |  |  | | --- | --- | | **A Half** can be written... |  | |  |  | | As a percentage: | 50% | | As a decimal: | 0.5 | | As a fraction: | 1/2 | |

Read more about this at [Decimals, Fractions and Percentages](http://www.mathsisfun.com/decimal-fraction-percentage.html).

Some Worked Examples

**Example: Calculate 25% of 80**

25% = 25/100

(25/100) × 80 = 20

So 25% of 80 is **20**

**Example: 15% of 200 apples were bad. How many apples were bad?**

15% = 15/100

(15/100) × 200 = 15 × 2 = 30 apples

**30** apples were bad

**Example: if only 10 of the 200 apples were bad, what percent is that?**

As a fraction, 10/200 = 0.05

As a percentage it is: (10/200) x 100 = 5%

**5%** of those apples were bad

**Example: A Skateboard is reduced 25% in price in a sale. The old price was $120. Find the new price**

First, find 25% of $120:

25% = 25/100

(25/100) × $120 = $30

25% of $120 is $30

So the **reduction** is $30

Take the reduction from the original price

$120 - $30 = $90

The Price of the Skateboard in the sale is **$90**

The Word

"Percent" comes from the latin *Per Centum*. The latin word *Centum* means 100, for example a Century is 100 years.

Percent vs Percentage

My Dictionary says "Percentage" is the "result obtained by multiplying a quantity by a percent". So 10 **percent** of 50 apples is 5 apples: the 5 apples is the **percentage**.

But in practice people use both words the same way.