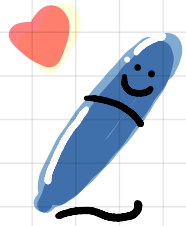
1.4) Percentages



Numbers:Percentages.

Find x% of y

Example: Find 75% of 300.

Example: Find 115% of 72.

Numbers:Percentages.

Express x as a percentage of y $\longrightarrow \left(\frac{X}{Y}\right) \times 100$

Example: Express 63 as a percentage of 350.

Numbers:Percentages.

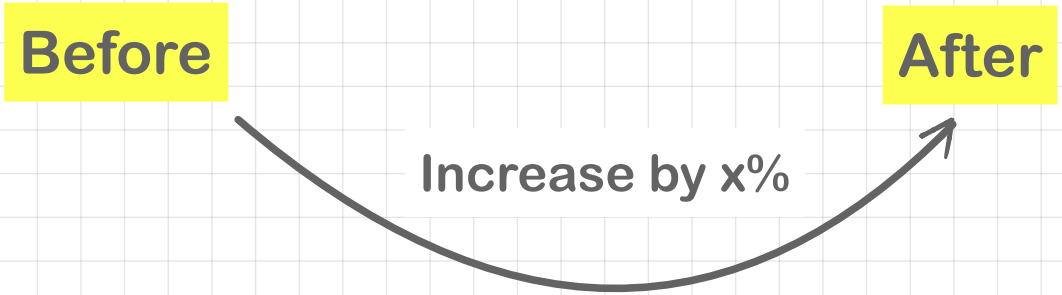
Example: Express 42 sec as a percentage of 5 min.

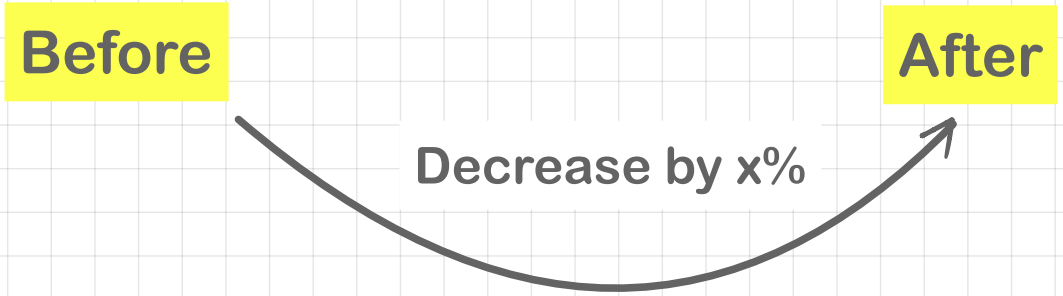
Numbers:Percentages.

Example: Express £ 1.50 as a percentage of 40p.

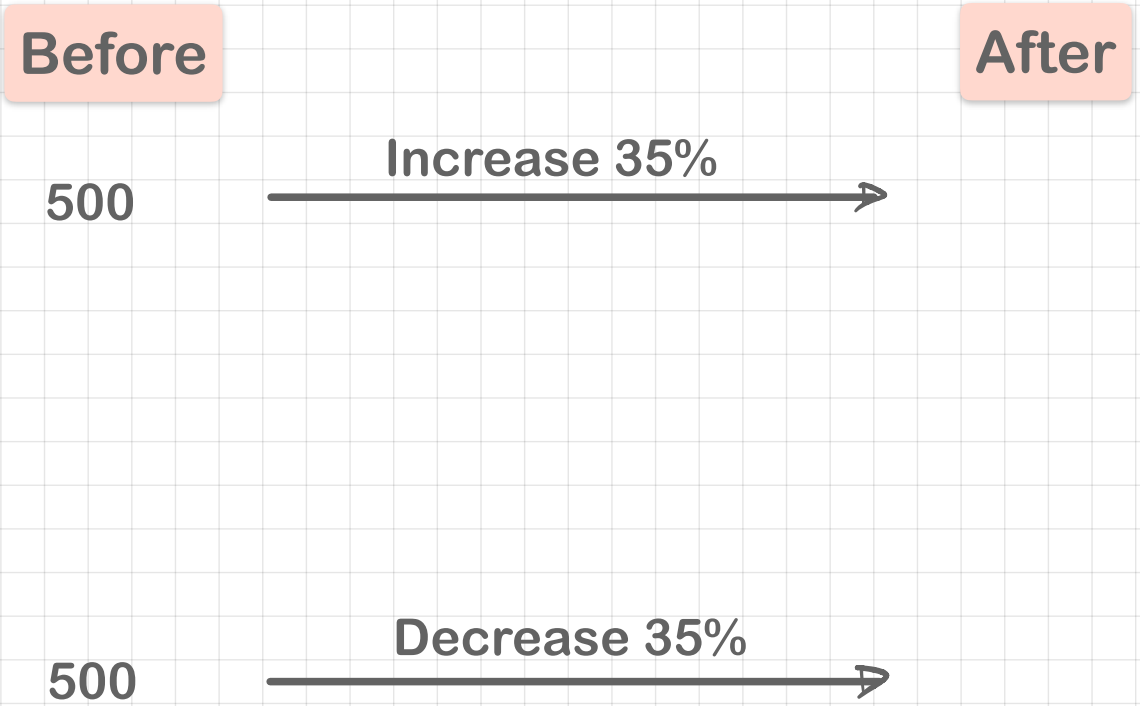
Numbers:Percentages.

Find the new amount after x% (increase/decrease)





Numbers:Percentages.



Numbers:Percentages.

Example: A computer is reduced in price by 35% in the sales.

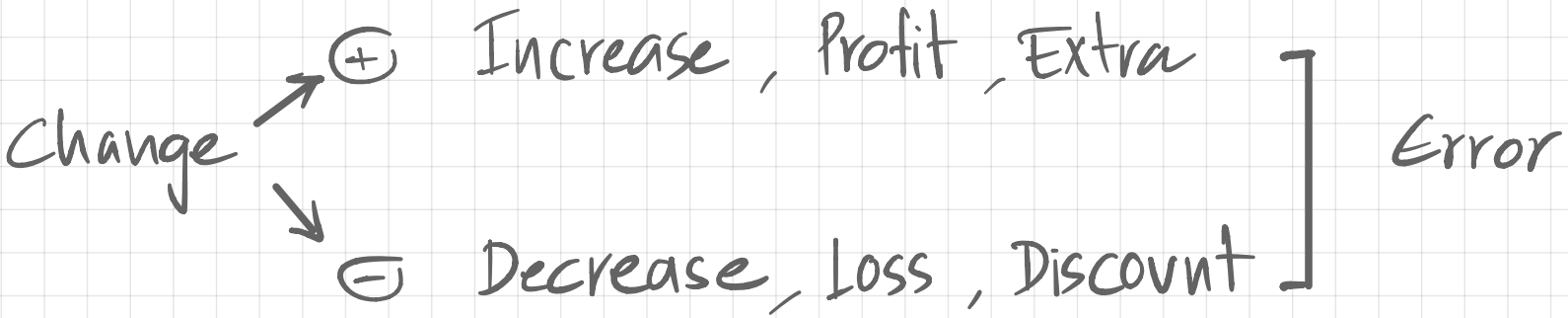
It originally cost £ 580. What is the new price of the computer.

Numbers:Percentages.

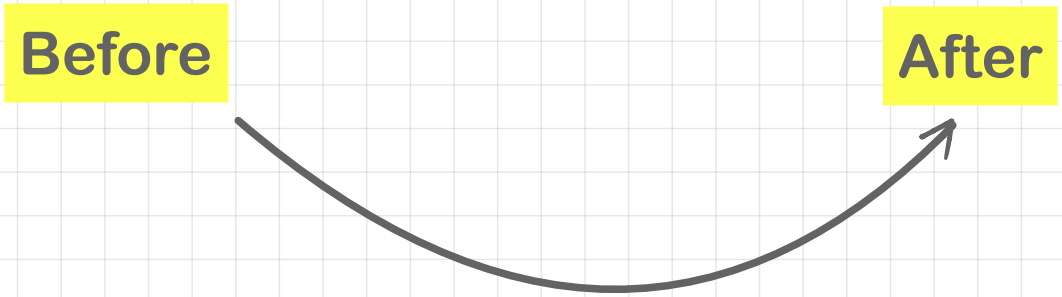
Example: A normal bottle of juice contains 450 ml. A special offer bottle contains 28% extra. How much juice is in the special offer bottle?

Numbers:Percentages.

Finding the percentage change



Numbers:Percentages.



m = 1.15

m = 0.74

m = 1.02

m = 0.97

m = 2.15

Numbers:Percentages.

Example: An art dealer bought a painting for £ 2500 and sold for £ 3200.

Work out percentage profit.

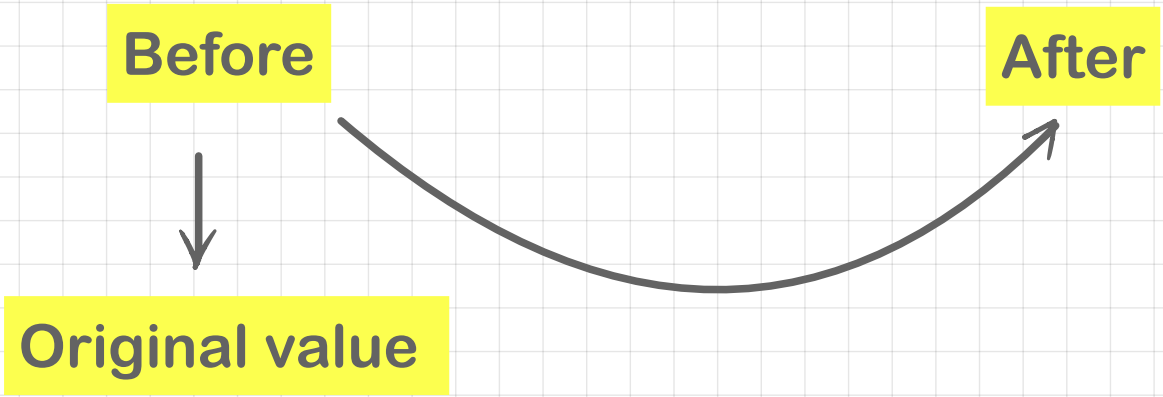
Numbers:Percentages.

Example: Sarah's weight was 75 kg. After dieting,her weight was 69 kg.

Work out Sarah's percentage loss.

Numbers:Percentages.

Finding the original value



Numbers:Percentages.

Example: A house increases in value by 20% to £ 98400.

Find what it was value before the rise.

Numbers:Percentages.

Example : In a sale, normal prices are reduced by 35%. The sale price of a clock is £ 91. Work out the normal price of the clock.

Numbers:Percentages.

Extra : In a sale, reduced by 12%.

The price of a computer is reduce by £ 96. Work out normal price.

Numbers:Percentages.

Interest

Invests £ 10000 rate 5% per annum for 2 years.

Simple

Compound

Numbers:Percentages.

Simple Interest

$$\text{Total interest} = p \times \frac{r}{100} \times t$$

p = Initial amount

r = Rate of interest

t = Time

Numbers:Percentages.

Example : Find t'he simple interest on £ 1200 for 3 years at 6% per annum.

Numbers:Percentages.

Example: Find the length of time for $ 400 to earn $ 160. If invested at

8% per annum for simple interest.

Numbers:Percentages.

Compound Interest

$$\text{total value} = p\left(1 + \frac{r}{100}\right)^{t}$$

p = Initial amount

r = Rate of change

t = Time

(+) Increase compound interest

(−) Decrease depreciation

Numbers:Percentages.

Example : A man invests £ 15000 in a savings account which pays 8% compound interest per annum. How much will there be after 5 years?

Numbers:Percentages.

Example : Sarah has just bought a car for £ 7000. If the car depreciates by 10% each year. How much will it be worth in 3 years' time.

Numbers:Percentages.

Extra

Example:The house is valued at €250000. Its value increases by 10% then decreases by 10% the year after. What is the value of house after these two changes.

Numbers:Percentages.

Example:The house is valued at €250000. Its value increases by 10% then decreases by 15% the year after. What is the value of house after these two changes.

Numbers:Percentages.

Example:The house value increases by 10% then decreases by 15%

the year after. Find the percentage changes.

Numbers:Percentages.

Example:The house value increases by 10% then increases by 15%

the year after. Find the percentage changes.

Numbers:Percentages.

Appreciated = Increase

Depreciated = Decrease