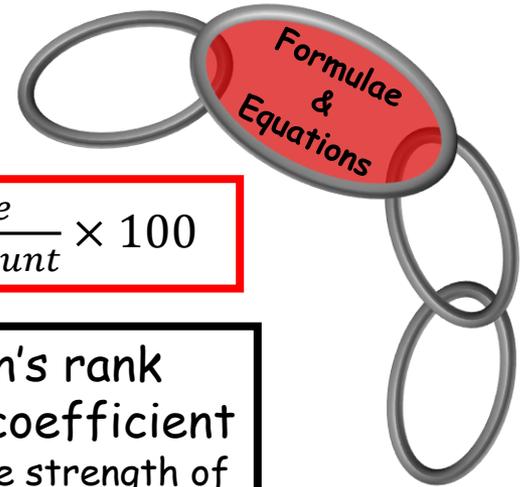


# Formulae and Equations

## Formulae



$$\text{Speed} = \frac{\text{Distance}}{\text{Time}}$$



$$\text{Percentage change} = \frac{\text{Difference}}{\text{Original amount}} \times 100$$

$$\text{Population density} = \frac{\text{Total population}}{\text{Total area of land}}$$

Often measured as people per square mile.

## Substitution

Replace letters with the corresponding numbers.

**Example** Minimum wage (W) is £8 per hour and you work for 13 hours (H).  
How much do you get paid?

$$\text{Pay} = \text{Minimum wage} \times \text{Hours}$$

$$P = W \times H$$

$$\text{Pay} = \text{£}8 \times 13 = \underline{\text{£}104}$$



Spearman's rank correlation coefficient  
(Determines the strength of the relationship between two sets of data.)

$$r_s = 1 - \frac{6\sum D^2}{n(n^2 - 1)}$$

$\Sigma$  This symbol is called sigma and means the sum of.