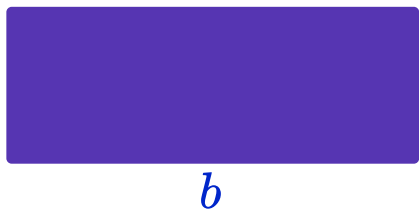


Formulas

Formulas are rules connecting two or more variables. By **substituting** known values into the formula, we can calculate the values of unknown variables.

 **Example**

Here is a rectangle with base b and height h



The formula for the **perimeter** P of a rectangle is $P = 2(b + h)$

Substitute in the values for the **base** and **height** of the rectangle to find the **perimeter** P .

Other examples of maths formulas:

$$A = \pi r^2$$

$$s = \frac{d}{t}$$

$$V = \frac{1}{3}\pi r^2 h$$

$$\sin(\theta) = \frac{O}{H}$$

Changing the Subject of a Formula

Changing the subject of a formula rearranges it by moving variables and constants (numbers) to the other side of the equals sign to leave the variable we want by itself.

To do this we use inverse operations - exactly the same process we apply to solving equations.



Example

Make f the subject of $h = \frac{f + 4}{2}$

$$h = \frac{f + 4}{2}$$

$\times 2$

$\times 2$

$$2h = f + 4$$

-4

-4

$$2h - 4 = f$$