

Simultaneous Equations

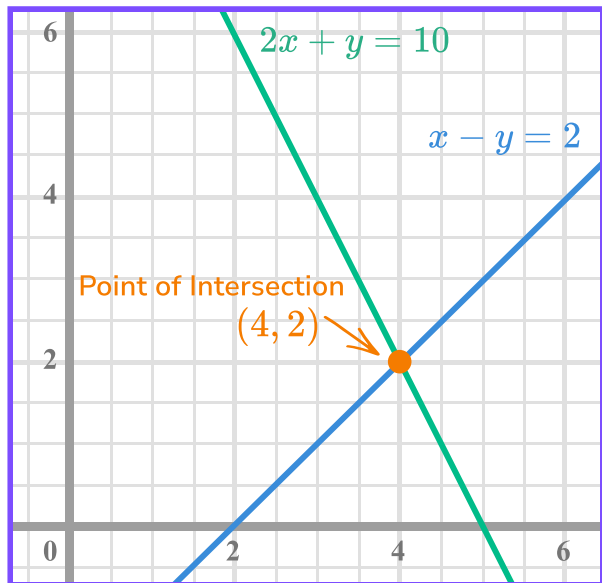
Simultaneous equations are two or more algebraic equations that share variables.

 **Example**

Solve the simultaneous equations $2x + y = 10$

$$x - y = 2$$

We can solve the equations using **elimination**, **substitution** or **graphically**



Elimination:

$$\begin{array}{r} 2x + y = 10 \\ + \quad x - y = 2 \\ \hline 3x \quad = 12 \\ \div 3 \quad \div 3 \\ \hline x = 4 \end{array}$$

Substitute $x = 4$
into $x - y = 2$

$$4 - y = 2$$

$$\underline{\underline{y = 2}}$$