

## Algebraically

## Steps

- 1 Get the same number of **y terms** in both equations by multiplying.
- 2 Eliminate the **y terms** by adding or subtracting.
- 3 Solve to find **x**.
- 4 Substitute the value for **x** into one of the original equations.
- 5 Solve to find **y**.

$$1 \quad \begin{array}{l} 3x + 2y = 12 \\ x + 3y = 11 \end{array}$$

$$2 \quad \begin{array}{l} 4x + 2y = 14 \\ 2x + 5y = 11 \end{array}$$

$$3 \quad \begin{array}{l} 2x + 3y = 13 \\ 5x + 2y = 27 \end{array}$$

$$4 \quad \begin{array}{l} 4x + 3y = 17 \\ 7x - 4y = 2 \end{array}$$

$$5 \quad \begin{array}{l} 11x - 3y = 8 \\ 9x + 4y = 13 \end{array}$$

$$6 \quad \begin{array}{l} 5x + 3y = 12 \\ 6x - 4y = 22 \end{array}$$

$$7 \quad \begin{array}{l} 5x + 4y = 11 \\ 2x + 3y = 3 \end{array}$$

$$8 \quad \begin{array}{l} 4x + 5y = 26 \\ 5x + 4y = 28 \end{array}$$

$$9 \quad \begin{array}{l} 3x - 2y = 12 \\ x - 3y = 11 \end{array}$$

$$10 \quad \begin{array}{l} 4x - 2y = 14 \\ 2x - 5y = 11 \end{array}$$

## Graphically

- 1 Solve the following equations graphically. Use the **table method** to plot your lines.

$$(i) \quad \begin{array}{l} y = 3x - 2 \\ y = x + 2 \end{array}$$

$$(ii) \quad \begin{array}{l} y = 3x - 1 \\ y = x + 3 \end{array}$$

$$(iii) \quad \begin{array}{l} y = 2x \\ y = x - 3 \end{array}$$

$$(iv) \quad \begin{array}{l} y = 2x + 3 \\ y = x + 1 \end{array}$$

- 2 Solve the following equations graphically. Use the **x = 0 and y = 0 method** to plot your lines.

$$(i) \quad \begin{array}{l} 3x + 8y = 24 \\ x + y = 3 \end{array}$$

$$(ii) \quad \begin{array}{l} x + y = 5 \\ x + 2y = 8 \end{array}$$

$$(iii) \quad \begin{array}{l} x + 2y = 10 \\ 2x + 3y = 18 \end{array}$$

$$(iv) \quad \begin{array}{l} 3x + 2y = 12 \\ x + 6y = 12 \end{array}$$