Teaching Simultaneous Equations

1. Linear Equations
2. Linear and hyperbolic equations
3. Linear and Quadratic equations
Teaching Simultaneous Equations

Linear Equations

Two equations - two unknowns

Example 1
Solve for \( x \) and \( y \):

\[
\begin{align*}
2x + 3 &= 12 \\
y &= 2x + 3
\end{align*}
\]

Graphic Solution

Example 2
Solve for \( x \) and \( y \):

\[
\begin{align*}
y &= 2x + 4 \\
0 &= 2x + 4
\end{align*}
\]

Graphic Solution

Example 3
Solve for \( x \) and \( y \):

\[
\begin{align*}
y &= 2x + 12 \\
3y - 2x &= 6
\end{align*}
\]

Graphic Solution

Example 4
Solve for \( x \) and \( y \):

\[
\begin{align*}
x + 3y &= 1 \\
\frac{5}{2}x + \frac{3}{2} &= 1
\end{align*}
\]
Teaching Simultaneous Equations

Example 4
Solve for x and y:
\[ x + 2y = 1 \]
\[ \frac{1}{2} - \frac{1}{y} = 1 \]

Graphic Solution

Example 5
Solve for x and y:
\[ y \sqrt{x + 2} = 4 \]
\[ x = 2 \]
\[ y = 2 \times x = 4 \]

Graphic Solution

Example 6
Solve for x and y:
\[ y = x^2 - 9 \]
\[ y = 5x - 3 \]

Graphic Solution