

## Example 2:

Solve the equation.

$$2a^2 + 26a = 0$$

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## Example 1:

Solve the equation.

$$(y - 2)(5y - 4) = 0$$

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## Example 4:

Solve the equation.

$$10b^2 - 14b + 4 = 0$$

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## Example 3:

Solve the equation.

$$m^2 - 10m + 21 = 0$$

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## Example 6:

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$$x^3 + x^2 - 4x - 4 = 0.$$

## Example 5:

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$$4h^2 - 36 = 0$$

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Solve the equation  $(y - 2)(5y - 4) = 0$

$$\begin{array}{l} \swarrow \quad \searrow \\ (y - 2) = 0 \quad (5y - 4) = 0 \\ \textcircled{y = 2} \quad \textcircled{y = \frac{4}{5}} \end{array}$$

Solve the equation  $m^2 - 10m + 21 = 0$

$$\begin{array}{l} (m - 7)(m - 3) = 0 \\ \swarrow \quad \searrow \\ m - 7 = 0 \quad m - 3 = 0 \\ \textcircled{m = 7} \quad \textcircled{m = 3} \end{array}$$

Solve the equation  $4h^2 - 36 = 0$

$$\begin{array}{l} 4(h^2 - 9) = 0 \\ 4(h + 3)(h - 3) = 0 \\ \swarrow \quad \searrow \\ h + 3 = 0 \quad h - 3 = 0 \\ \textcircled{h = -3} \quad \textcircled{h = 3} \end{array}$$

Solve the equation  $2a^2 + 26a = 0$

$$\begin{array}{l} (2a)(a + 13) = 0 \\ \swarrow \quad \searrow \\ 2a = 0 \quad a + 13 = 0 \\ \textcircled{a = 0} \quad \textcircled{a = -13} \end{array}$$

Solve the equation  $10b^2 - 14b + 4 = 0$

$$\begin{array}{l} 2(5b^2 - 7b + 2) = 0 \\ 2(5b - 2)(b - 1) = 0 \\ \swarrow \quad \searrow \\ 5b - 2 = 0 \quad b - 1 = 0 \\ \textcircled{b = \frac{2}{5}} \quad \textcircled{b = 1} \end{array}$$

Solve the equation  $x^3 + x^2 - 4x - 4 = 0$

$$\begin{array}{l} (x^3 + x^2) + (-4x - 4) = 0 \\ x^2(x + 1) - 4(x + 1) = 0 \\ (x + 1)(x^2 - 4) = 0 \\ (x + 1)(x + 2)(x - 2) = 0 \\ \textcircled{x = -1} \quad \textcircled{x = -2} \quad \textcircled{x = 2} \end{array}$$

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## Solving Polynomial Equations

