Maths

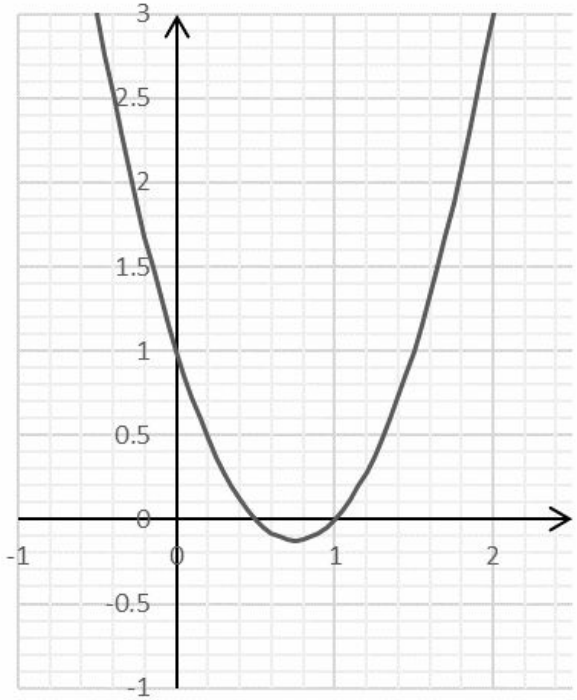
Solve quadratic graphs $= 0$, $= a$ and $= ax + b$

Miss Davies

This resource contains colour font and images

Plot quadratic equations

1. The graphs show $y = 2x^2 - 3x + 1$



Use the graph to find estimates for the solutions of:

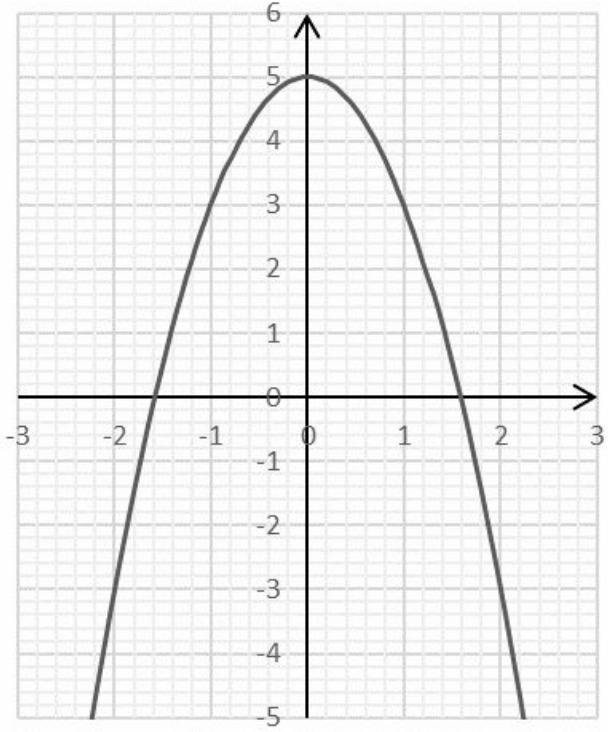
a) $2x^2 - 3x + 1 = 0$

b) $2x^2 - 3x + 1 = 2$

c) $2x^2 - 3x + 1 = 1.7$

Plot quadratic equations

2. The graphs show $y = 5 - 2x^2$



Use the graph to find estimates for the solutions of:

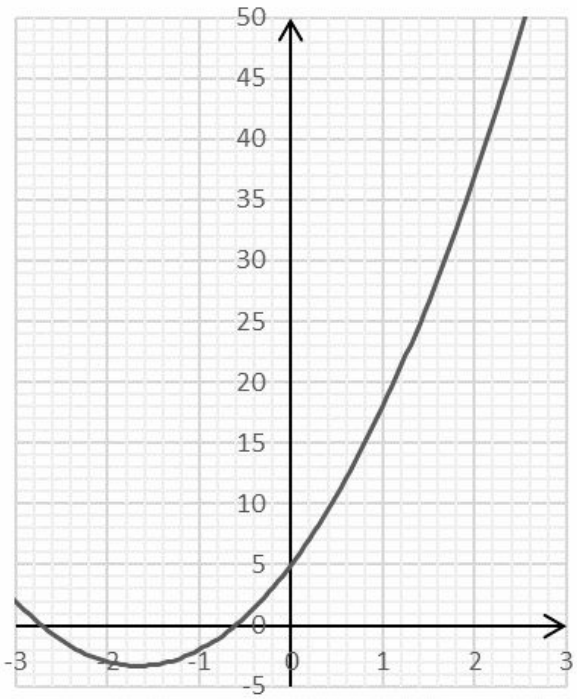
a) $5 - 2x^2 = 0$

b) $5 - 2x^2 = -3$

c) $5 - 2x^2 = x$

Plot quadratic equations

3. The graphs show $y = 3x^2 + 10x + 5$



Use the graph to find estimates for the solutions of:

a) $3x^2 + 10x + 5 = 0$

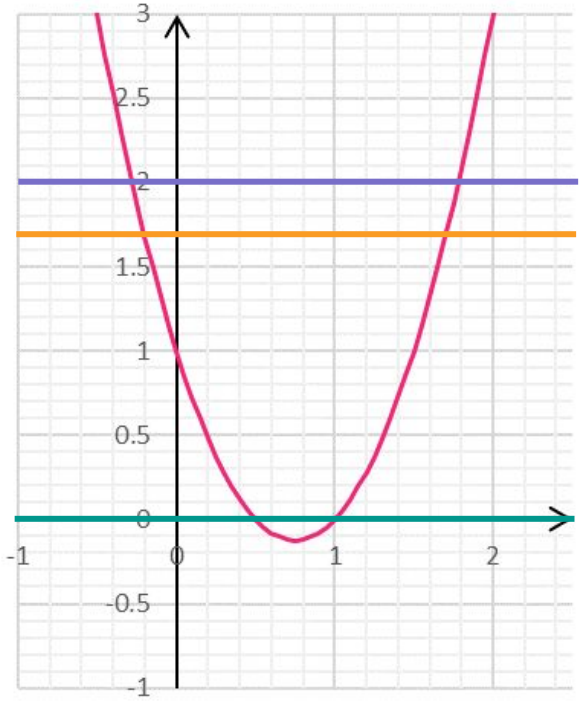
b) $3x^2 + 10x + 5 = 5x + 10$

c) $3x^2 + 10x + 5 = -5$

Answers

Plot quadratic equations

1. The graphs show $y = 2x^2 - 3x + 1$



Use the graph to find estimates for the solutions of

a) $2x^2 - 3x + 1 = 0$

$x = 0.5$ $x = 1$

b) $2x^2 - 3x + 1 = 2$

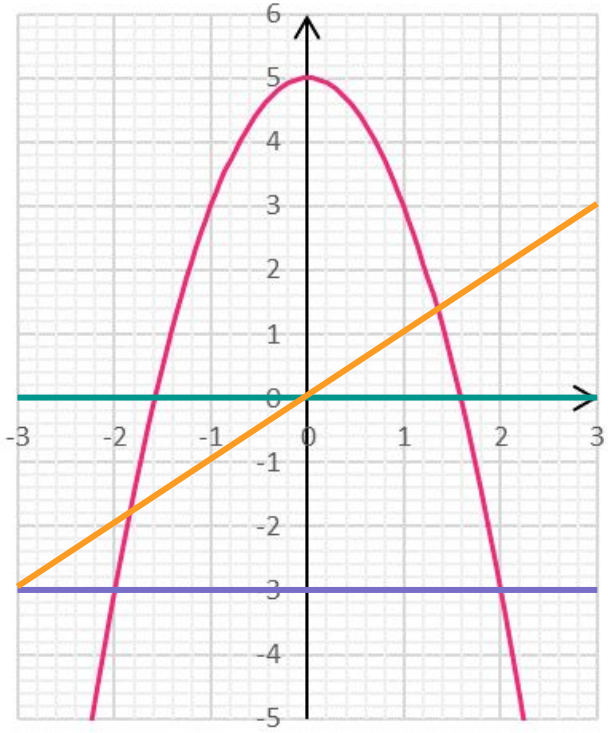
$x = -0.3$ $x = 1.8$

c) $2x^2 - 3x + 1 = 1.7$

$x = -0.2$ $x = 1.7$

Plot quadratic equations

2. The graphs show $y = 5 - 2x^2$



Use the graph to find estimates for the solutions of

a) $5 - 2x^2 = 0$

$x = -1.6 \quad x = 1.6$

b) $5 - 2x^2 = -3$

$x = -2 \quad x = 2$

c) $5 - 2x^2 = x$

$x = -1.8 \quad x = 1.25$

Plot quadratic equations

3. The graphs show $y = 3x^2 + 10x + 5$

Use the graph to find estimates for the solutions of

a) $3x^2 + 10x + 5 = 0$

$x = -2.7 \quad x = -0.6$

b) $3x^2 + 10x + 5 = 5x + 10$

$x = -2.4 \quad x = 0.75$

c) $3x^2 + 10x + 5 = -5$

no solutions