

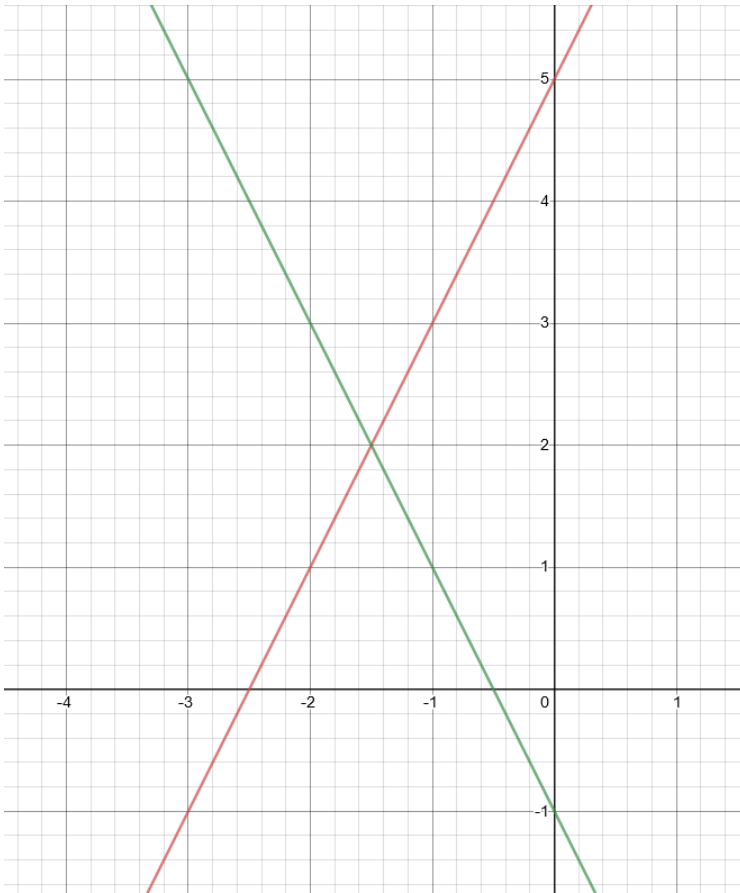
SIMULTANEOUS EQUATIONS (GRAPHICAL)

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Worked example

Solve:

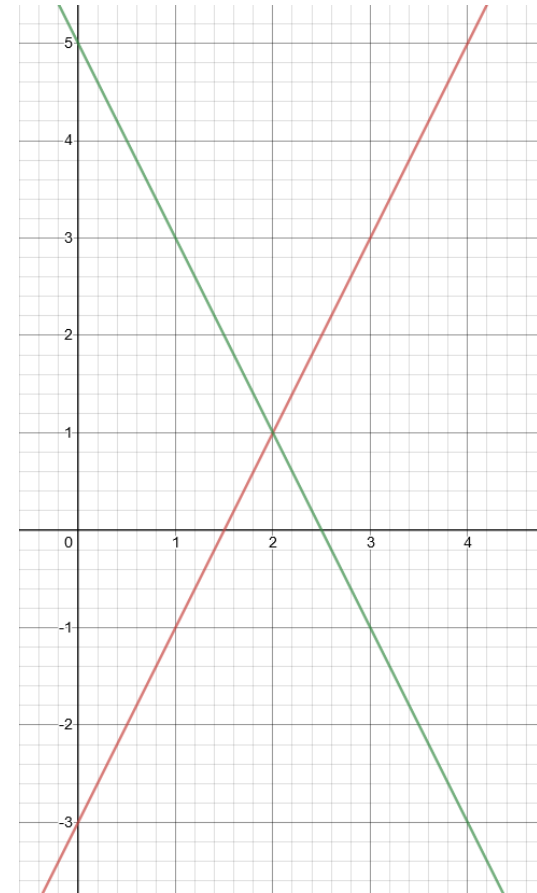
$$y = 2x + 5$$
$$y = -2x - 1$$



Your turn

Solve:

$$y = 2x - 3$$
$$y = -2x + 5$$



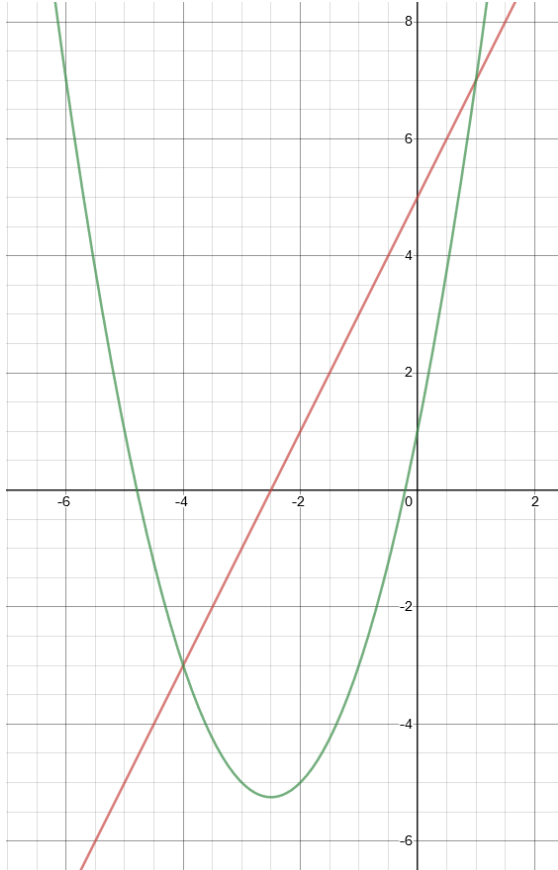
$$x = 2, y = 1$$

Worked example

Solve:

$$y = 2x + 5$$

$$y = x^2 + 5x + 1$$

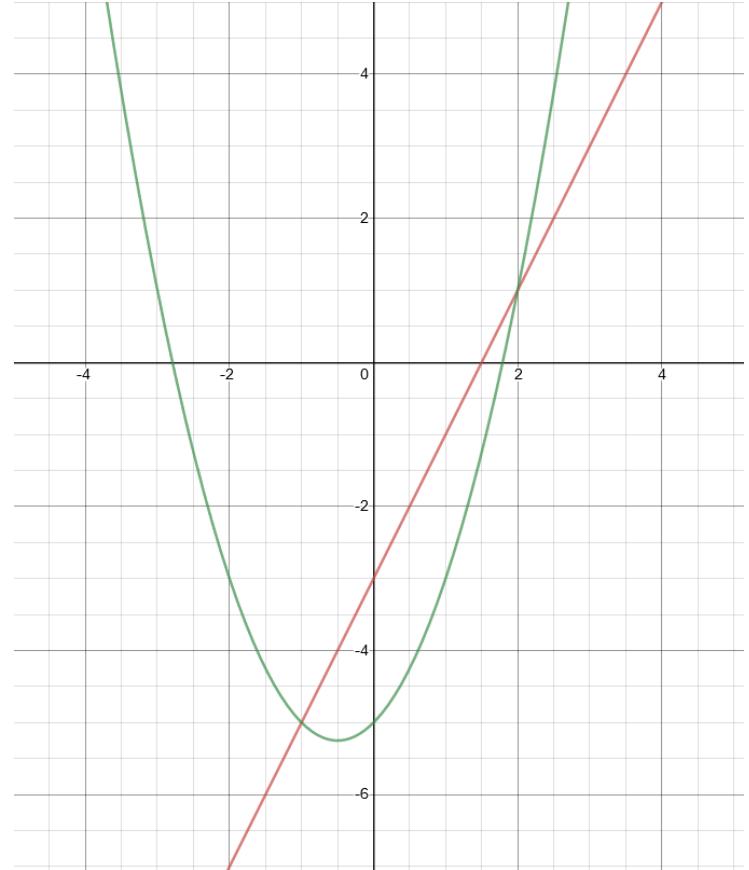


Your turn

Solve:

$$y = 2x - 3$$

$$y = x^2 + x - 5$$

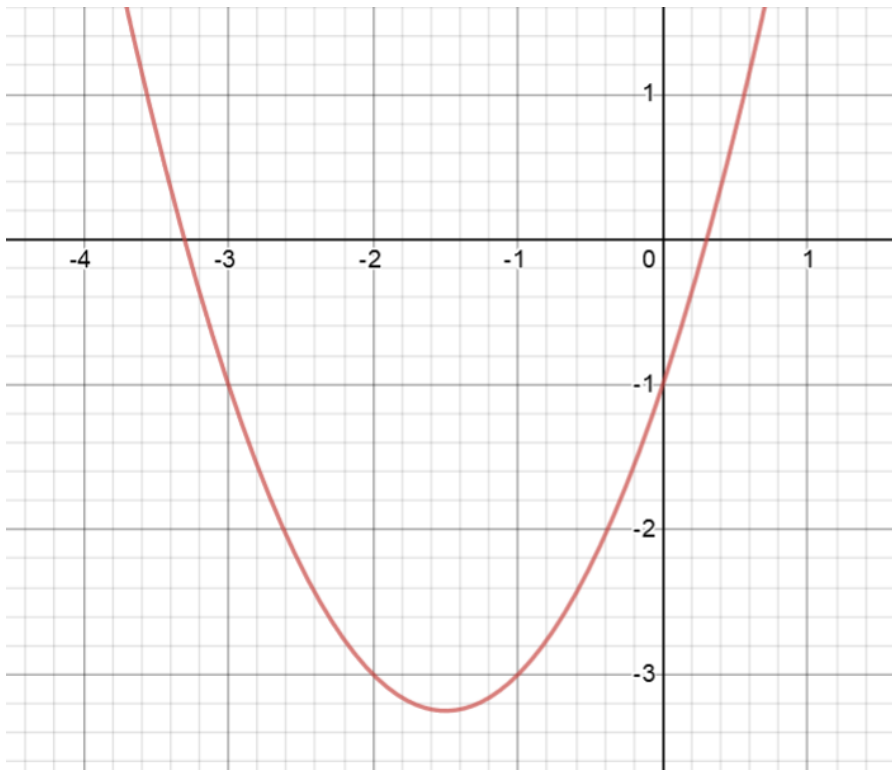


$$x = 2, y = 1$$

$$x = -1, y = -5$$

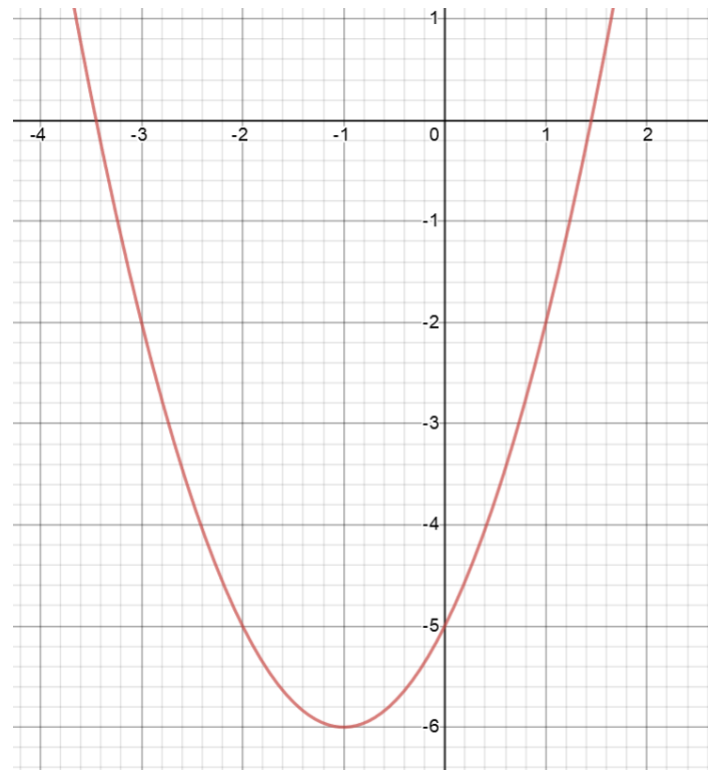
Worked example

The graph of $y = x^2 + 3x - 1$ is drawn below. Use the graph to estimate the solutions of $x^2 + 3x - 1 = 0$



Your turn

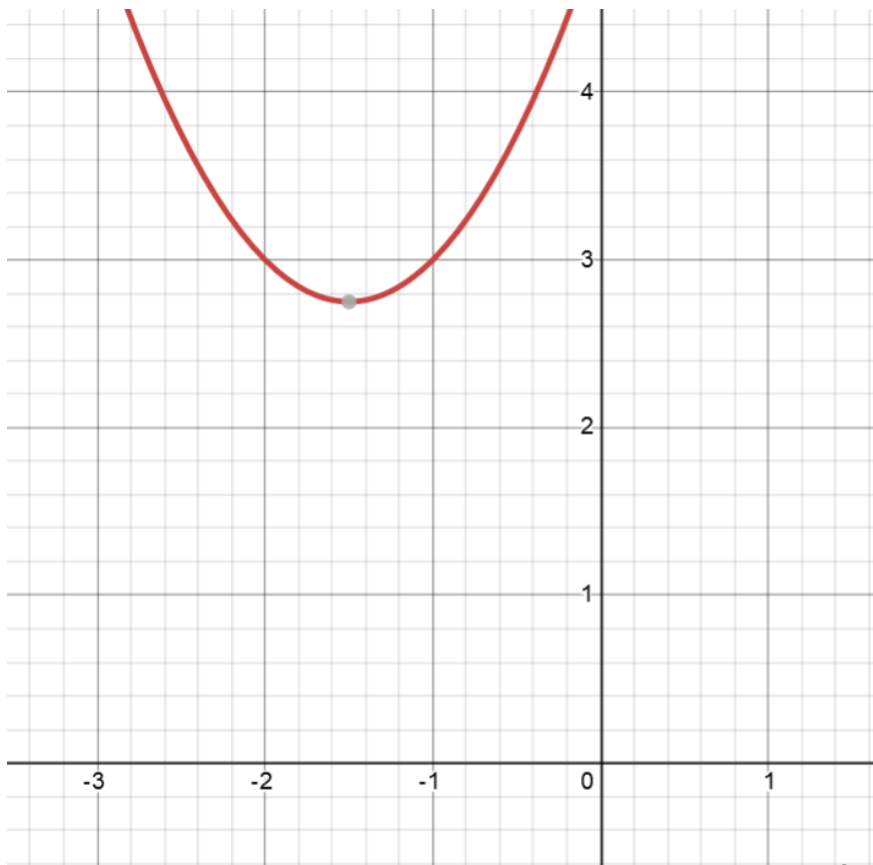
The graph of $y = x^2 + 2x - 5$ is drawn below. Use the graph to estimate the solutions of $x^2 + 2x - 5 = 0$



$$x = 1.45, x = -3.45 \text{ (3 dp)}$$

Worked example

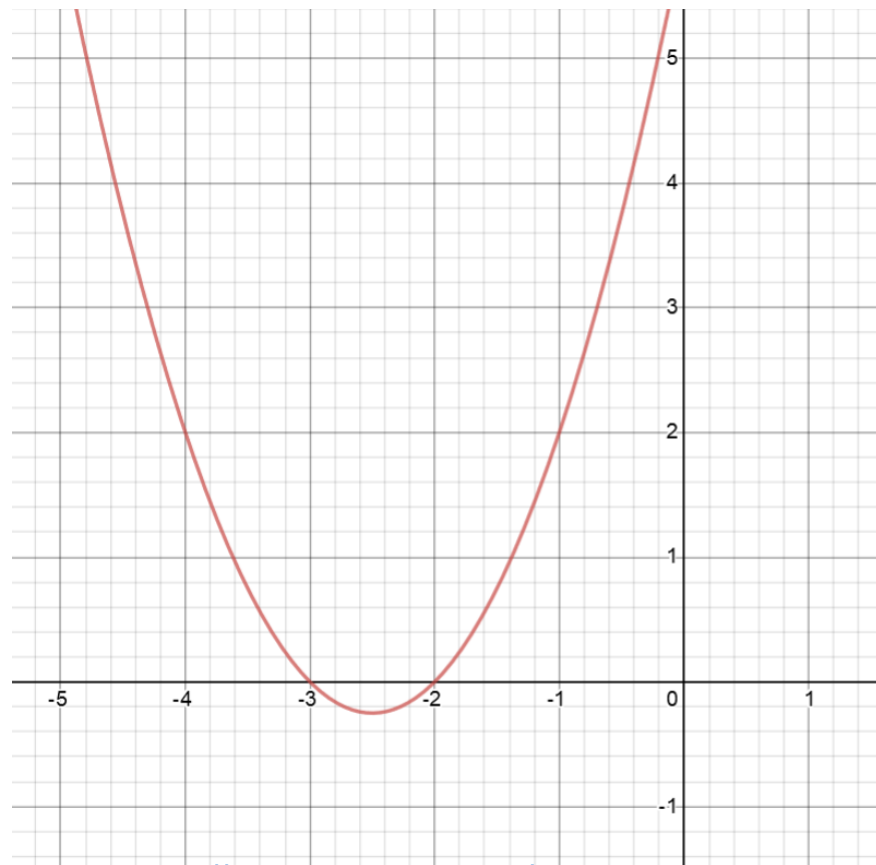
The graph of $y = x^2 + 3x + 5$ is drawn below. By drawing a suitable straight line on the grid, solve $x^2 + 3x + 2 = 0$



Your turn

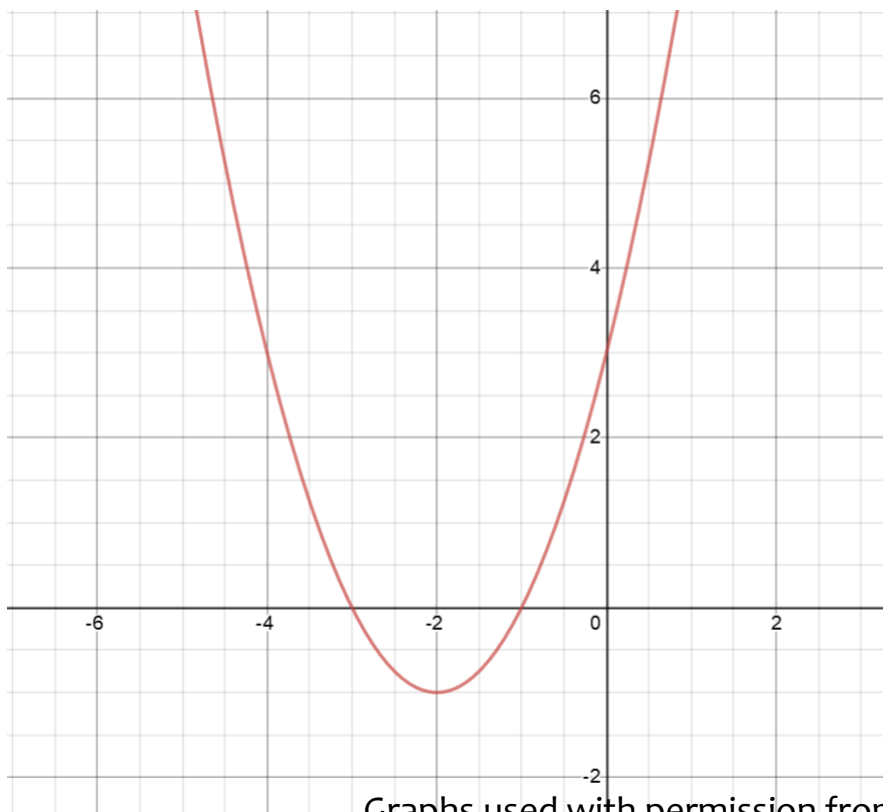
The graph of $y = x^2 + 5x + 6$ is drawn below. By drawing a suitable straight line on the grid, solve $x^2 + 5x + 4 = 0$

$$x = -4, x = -1$$



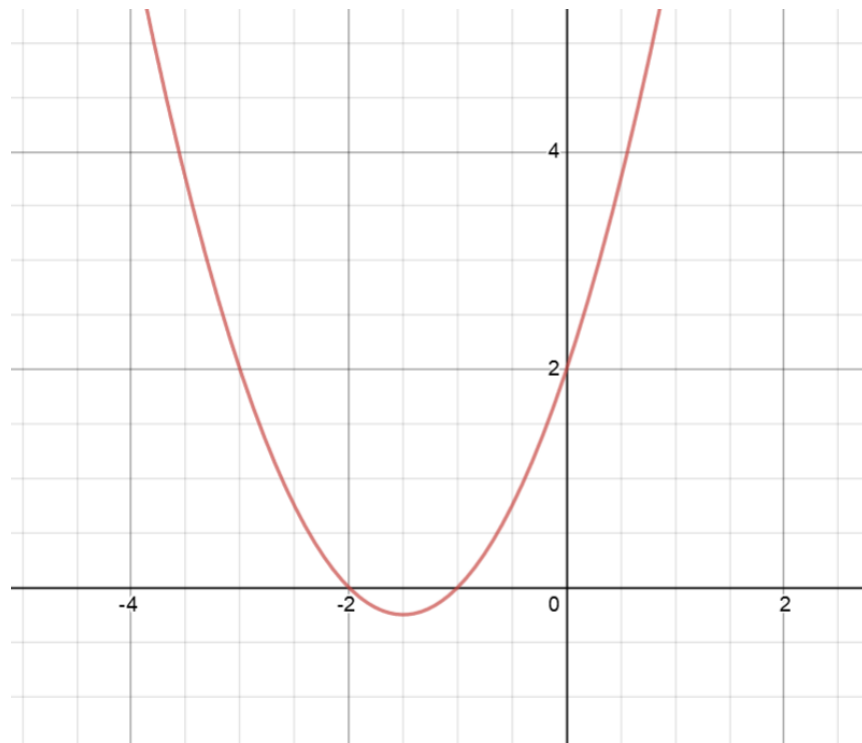
Worked example

The graph of $y = x^2 + 4x + 3$ is drawn below. By drawing a suitable straight line on the grid, find an estimate for the solution of the equation $x^2 + 4x + 3 = x + 2$



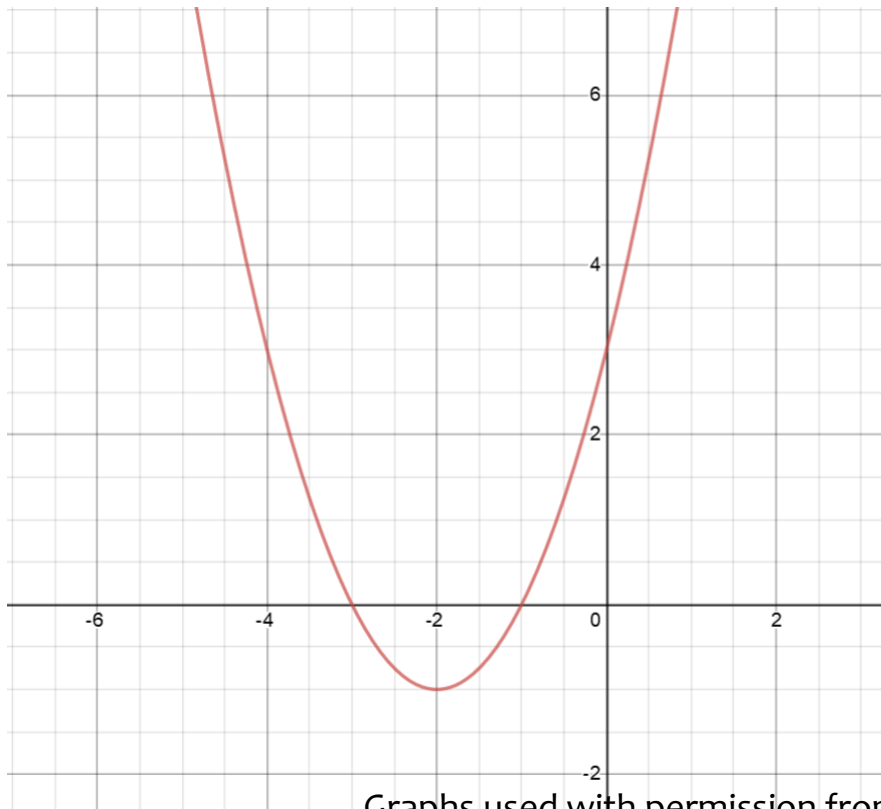
Your turn

The graph of $y = x^2 + 3x + 2$ is drawn below. By drawing a suitable straight line on the grid, find an estimate for the solution of the equation $x^2 + 3x + 2 = x + 3$ $x = 0.4, x = -2.4$ (1 dp)



Worked example

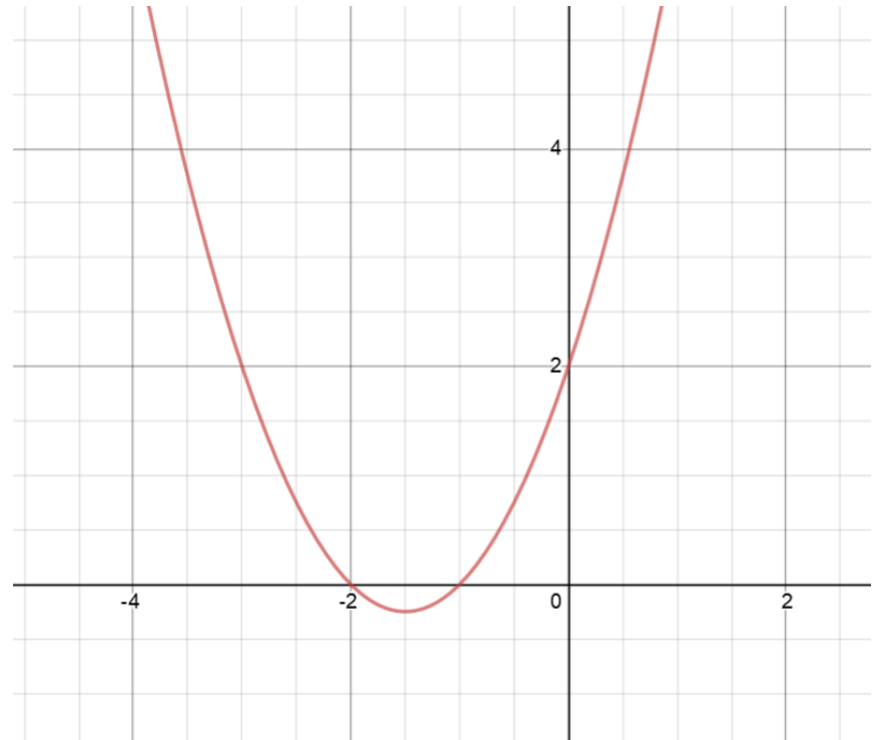
The graph of $y = x^2 + 4x + 3$ is drawn below. By drawing a suitable straight line on the grid, find an estimate for the solution of the equation $x^2 + 3x + 1 = 0$



Your turn

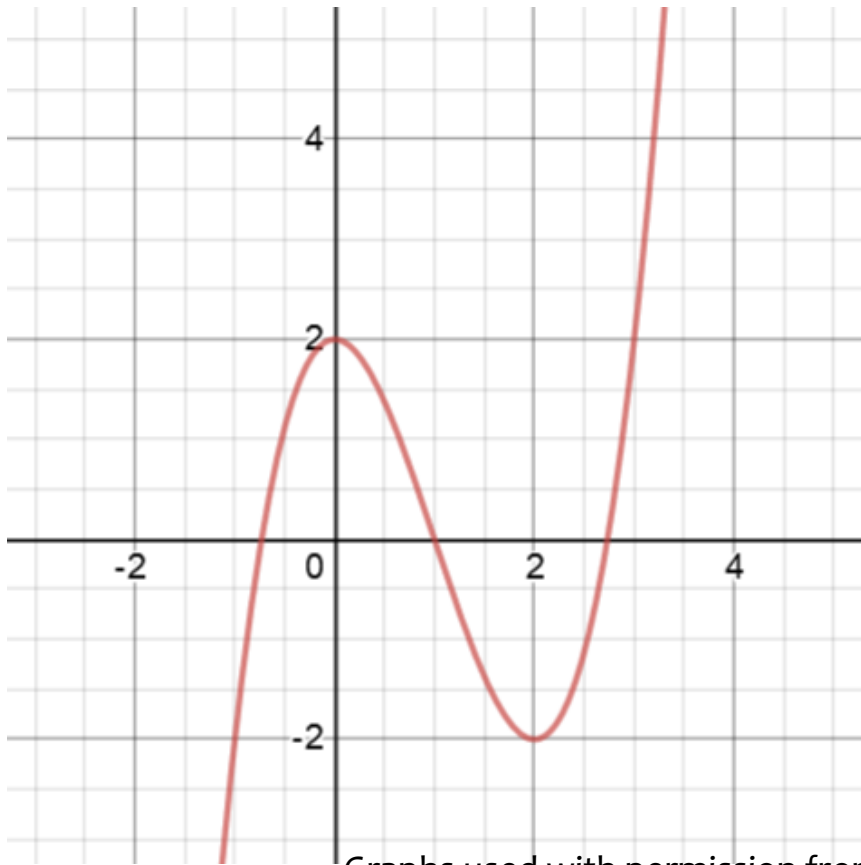
The graph of $y = x^2 + 3x + 2$ is drawn below. By drawing a suitable straight line on the grid, find an estimate for the solution of the equation $x^2 + 2x - 1 = 0$

$$x = 0.4, x = -2.4 \text{ (1 dp)}$$



Worked example

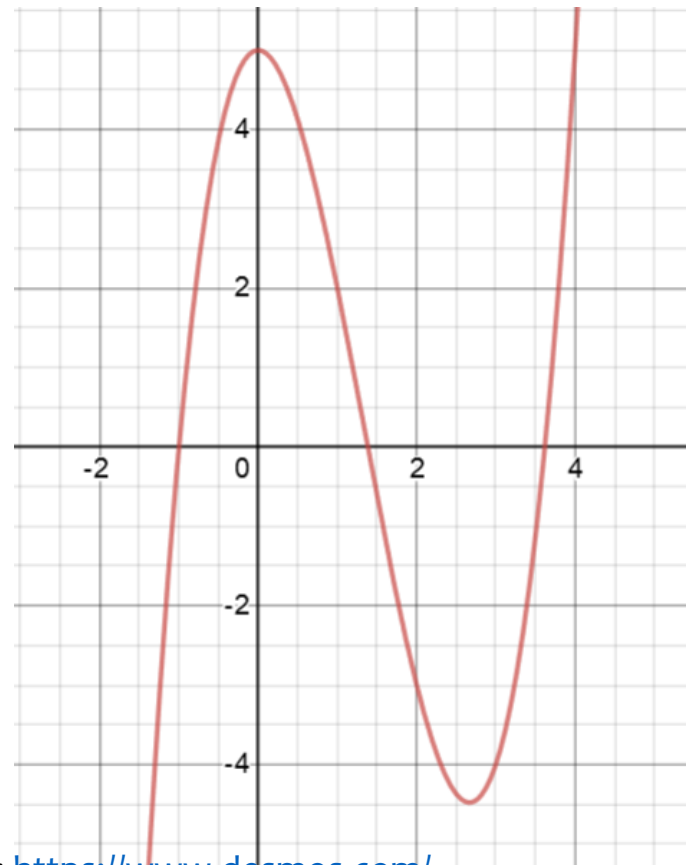
The graph of $y = x^3 - 3x^2 + 2$ is drawn below. Use the graph to estimate the solutions of $x^3 - 3x^2 + 2 = 0$



Your turn

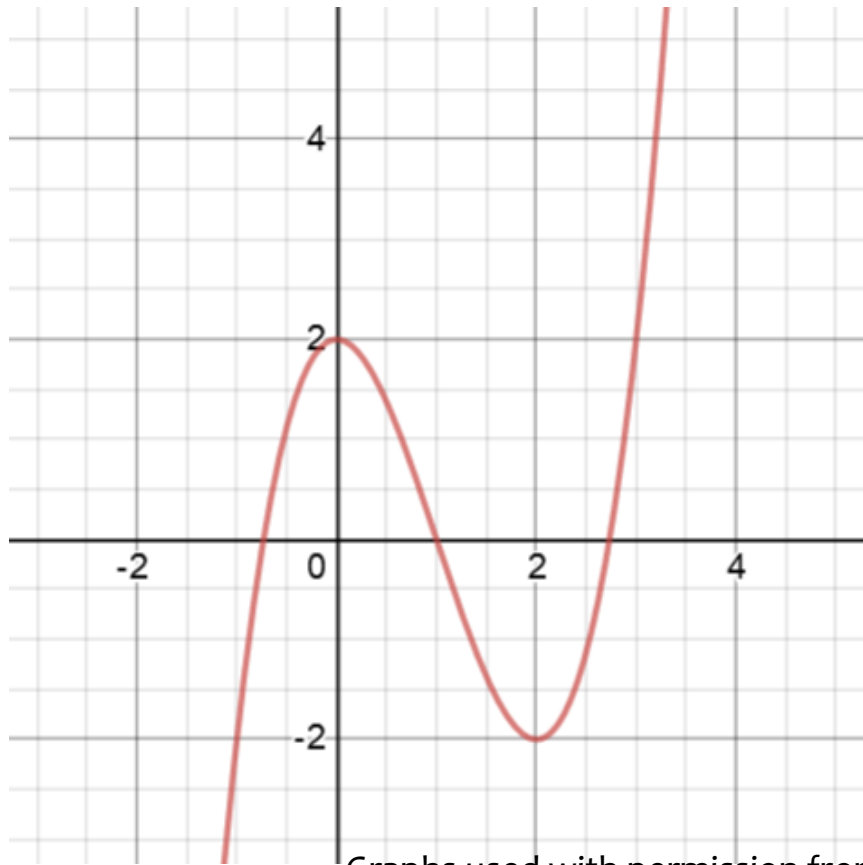
The graph of $y = x^3 - 4x^2 + 5$ is drawn below. Use the graph to estimate the solutions of $x^3 - 4x^2 + 5 = 0$

$$x = -1.0, x = 1.4, x = 3.6 \text{ (1 dp)}$$



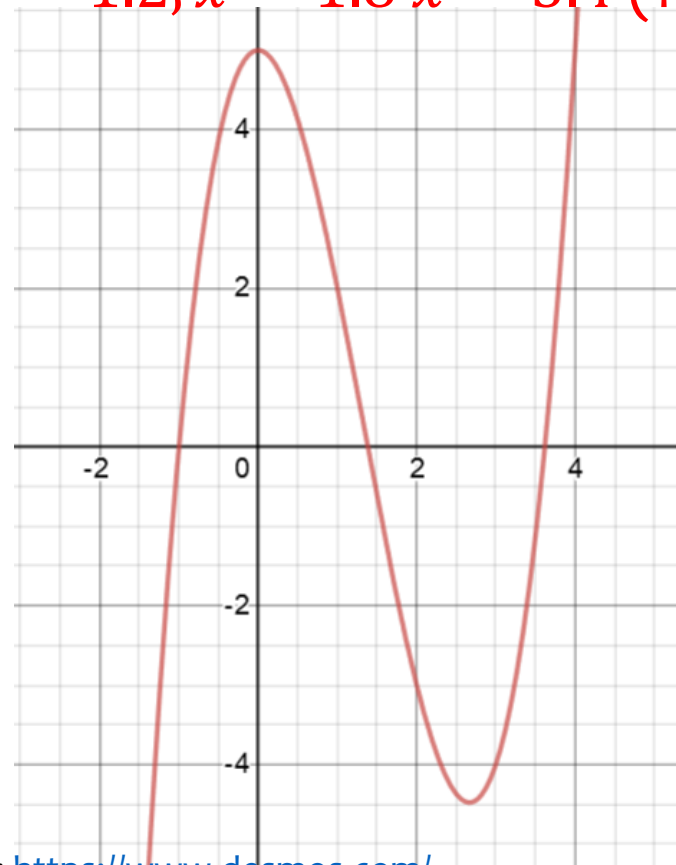
Worked example

The graph of $y = x^3 - 3x^2 + 2$ is drawn below. By drawing a suitable straight line on the grid, find an estimate for the solution of the equation $x^3 - 3x^2 + 3 = 0$



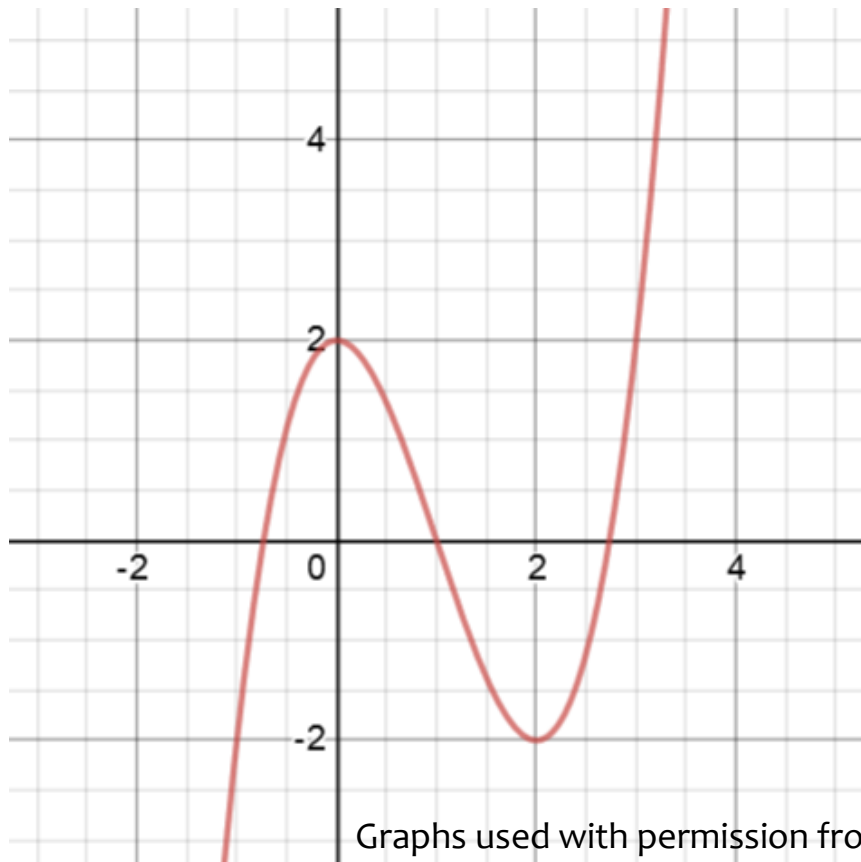
Your turn

The graph of $y = x^3 - 4x^2 + 5$ is drawn below. By drawing a suitable straight line on the grid, find an estimate for the solution of the equation $x^3 - 4x^2 + 7 = 0$
 $x = -1.2, x = 1.8, x = 3.4$ (1 dp)



Worked example

The graph of $y = x^3 - 3x^2 + 2$ is drawn below. By drawing a suitable straight line on the grid, find an estimate for the solution of the equation $x^3 - 3x^2 - 2x + 4 = 0$



Your turn

The graph of $y = x^3 - 4x^2 + 5$ is drawn below. By drawing a suitable straight line on the grid, find an estimate for the solution of the equation $x^3 - 4x^2 - x + 8 = 0$ $x = -1.3, x = 1.6, x = 3.7$

