

A46 (H)... Quadratic formula, how many roots?

OCR

Edexcel

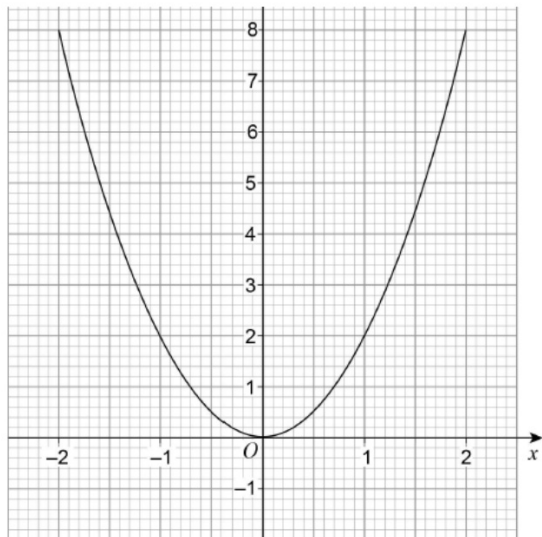
AQA

21 (a) Meera is using a **graphical** method to solve $2x^2 - 3x = 0$

Video created by W Neill

She draws the graph of $y = 2x^2$ and a straight line graph on the same grid.

Here is the graph of $y = 2x^2$



Complete her method to solve $2x^2 - 3x = 0$ [2 marks]

Answer _____

21 (b) Levi is solving $2x^2 + 5x = 0$

He uses this method.

A46

A48

$$2x^2 + 5x = 0 \quad \text{subtract } 5x \text{ from both sides}$$

$$2x^2 = -5x \quad \text{divide both sides by } x$$

$$2x = -5 \quad \text{divide both sides by 2}$$

$$x = -2.5$$

Evaluate his method and his answer.

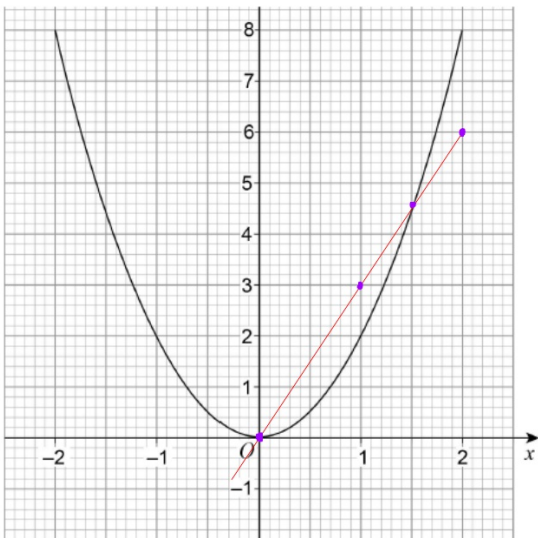
[2 marks]

21 (a) Meera is using a graphical method to solve $2x^2 - 3x = 0$

Video created by W Neill

She draws the graph of $y = 2x^2$ and a straight line graph on the same grid.

Here is the graph of $y = 2x^2$ ✓



Complete her method to solve $2x^2 - 3x = 0$ [2 marks]

$$2x^2 - 3x = 0$$

$$2x^2 = 3x$$

$$y = \uparrow \quad y = \uparrow$$

Draw $y = 3x + 0$
 $y = mx + c$



Answer $x = 0$, $x = 1.5$ ✓

Video created by W Neill

21 (b) Levi is solving $2x^2 + 5x = 0$

Quadratic

He uses this method.

A46

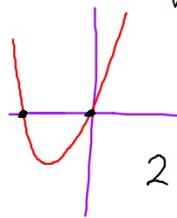
A48

$$2x^2 + 5x = 0 \quad \text{subtract } 5x \text{ from both sides}$$

$$2x^2 = -5x \quad \text{divide both sides by } x$$

$$2x = -5 \quad \text{divide both sides by 2}$$

$$x = -2.5$$



2 solutions

Evaluate his method and his answer.

$$2x^2 + 5x = 0$$

[2 marks]

$$x(2x + 5) = 0$$

missed

 $x = 0$ ✓

$$2x + 5 = 0$$

$$2x = -5$$

$$x = -5/2 \quad \checkmark$$