## Non-Calculator

Q1.

Solve $5x - y = 5$
$2y - x2 = 11$

You must show your working.
Do not use trial and improvement.

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Answer _____

(Total 6 marks)

Q2.

(a) Show clearly that $(3x + 1)2 \equiv 9x2 + 6x + 1$

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(1)

(b) Solve the simultaneous equations $y = 3x + 1$

$y^2 = 4x2 - x + 7$

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Answer _____

(5)

(Total 6 marks)

Q3.

Solve the simultaneous equations

$4x + y = -3$ and $y = x2 + 2x + 5$

Do not use trial and improvement.

You must show your working.

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Answer _____

(Total 6 marks)

Q4.

Solve the simultaneous equations

$$y = x2 - 6x - 20$$

$$y = 4 - x$$

You must show your working.

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Answer _____

(Total 5 marks)

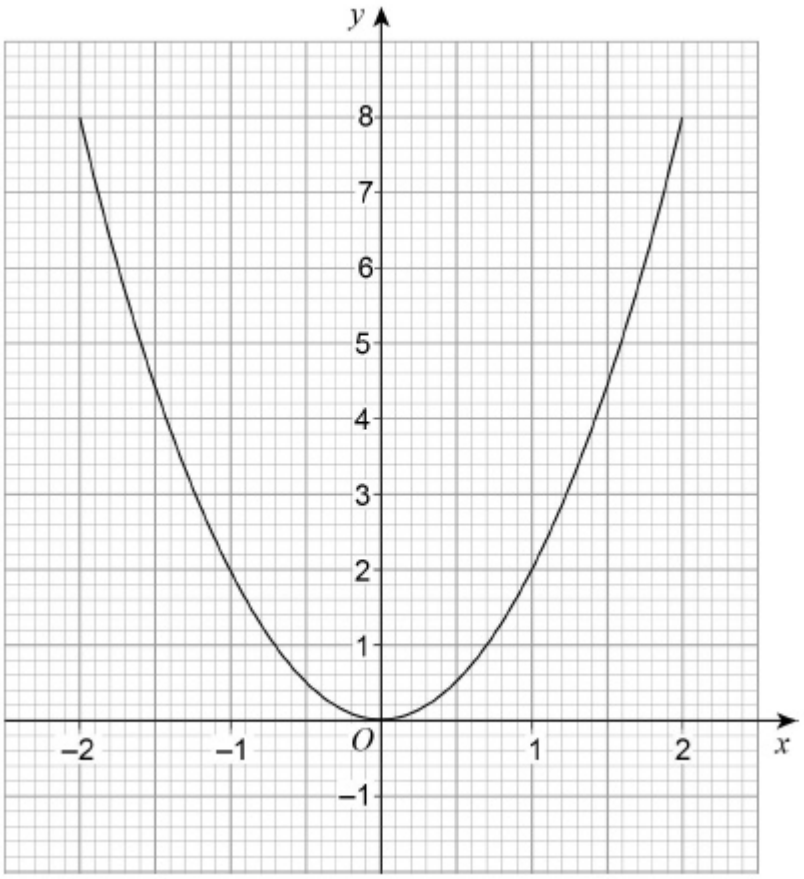
## Calculator

Q5.

(a) Meera is using a graphical method to solve $2x2 - 3x = 0$

She draws the graph of $y = 2x2$ and a straight line graph on the same grid.

Here is the graph of $y = 2x2$




Complete her method to solve $2x2 - 3x = 0$

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Answer _____

(2)

(b) Levi is solving $2x2 + 5x = 0$

He uses this method.

$2x2 + 5x = 0$ subtract $5x$ from both sides

$2x2 = -5x$ divide both sides by $x$

$2x = -5$ divide both sides by 2

$x = -2.5$

Evaluate his method and his answer.

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(2)

(Total 4 marks)

Q6.

Solve the simultaneous equations

$$x + y = 4$$

$$y^2 = 4x + 5$$

Do not use trial and improvement.

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Answer _____

(Total 6 marks)

Q7.

Work out the points of intersection of the graphs of

$$y = (x + 3)(x - 5)$$

and $y = 4x + 1$

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Answer _____

(Total 6 marks)

Q8.

Solve the simultaneous equations

$$y - x = 2$$
$$y = 2x2 + 5x + 1$$

Give your answers correct to 1 decimal place.

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Answer _____

(Total 6 marks)

Q9.

Solve the simultaneous equations

$y = 4x + 1$

$y = 2x2 + 7x - 1$

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Answer _____

(Total 5 marks)