Drawing Straight Line Graphs

Please write clearly in block capitals

Forename:
Surname:

Materials

For this paper you must have:
• mathematical instruments

You must **not** use a calculator.

Instructions

• Use black ink or black ball-point pen. Draw diagrams in pencil.
• Fill in the boxes at the top of this page.
• Answer all questions.
• You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
• Do all rough work in this book. Cross through any work you do not want to be marked.

Information

• The marks for questions are shown in brackets.
• You may ask for graph paper, tracing paper and more answer paper. These must be tagged securely to this answer book.
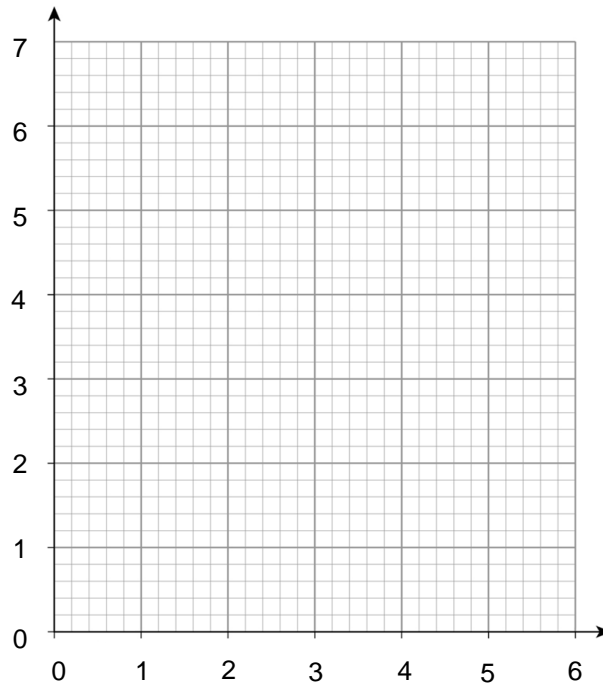
Advice

• In all calculations, show clearly how you work out your answer.

1   On the axes below, draw the straight line with y-intercept 1, and gradient 2.   *(Level 3)*
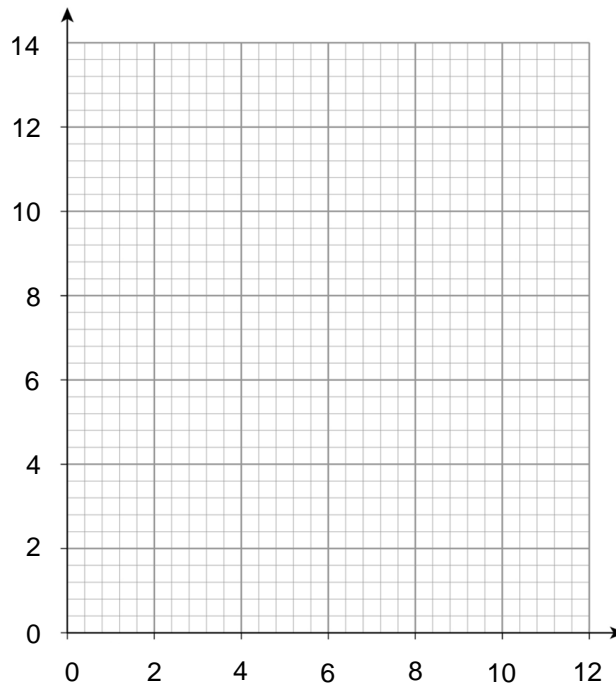
[3 marks]

2   On the axes below, draw the line $y = 3x + 2$ *(Level 4)*

[3 marks]

Turn over for next question

6

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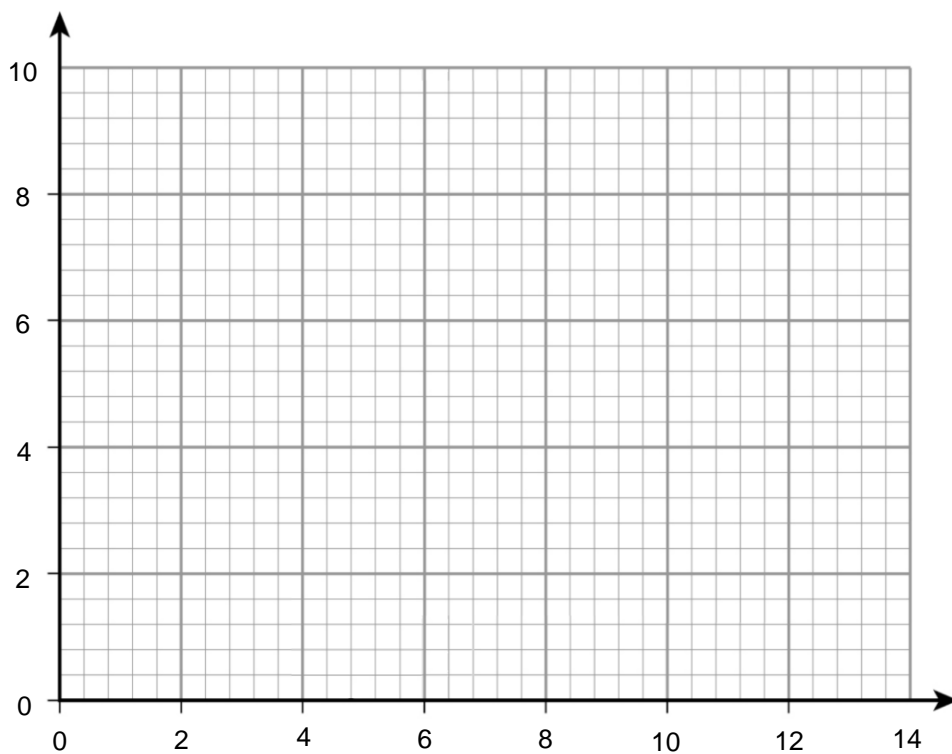**3**   A relationship between x and y is described as follows: *(Level 4)*

For every increase in x, y increases by ½ of x

Fill in the rest of the $xy - table$ and use this to plot the straight line on the axes below.

[4 marks]

x	y
	2
4	4
	6
	8

Turn over for next question

Turn over ▶

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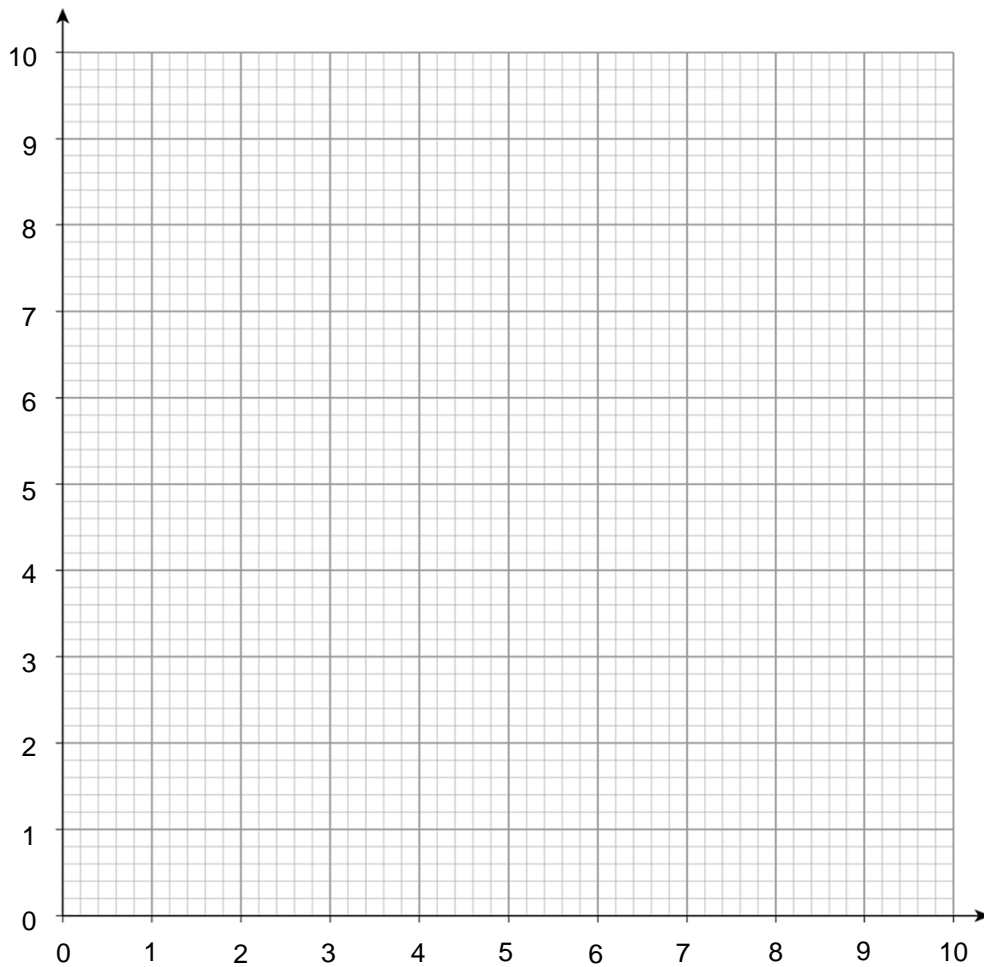**4(a)** On the square grid below plot the following lines: *(Level 4)*

$$x = 3$$
$$y = 1$$
$$x = 7$$
$$y = 6$$

[4 marks]

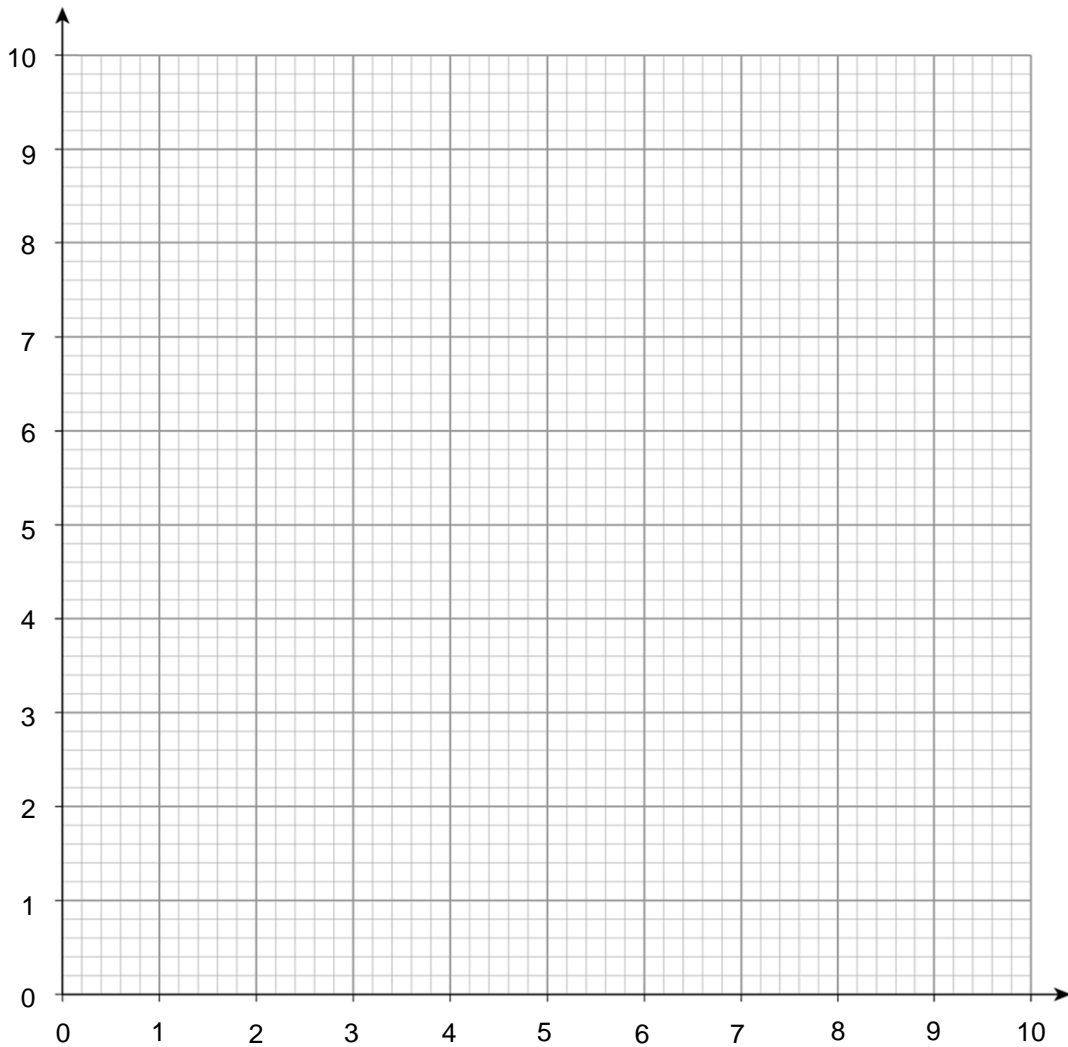**4(b)** What is the area of the shape bounded by the four lines?

[1 mark]

Answer

Turn over for next question

5

Turn over ▶

5   By rearrangement or otherwise, draw the line $y + 2x - 10 = 0$ on the grid below.   *(Level 4)*

[3 marks]

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$\dfrac{}{3}$

Turn over ▶

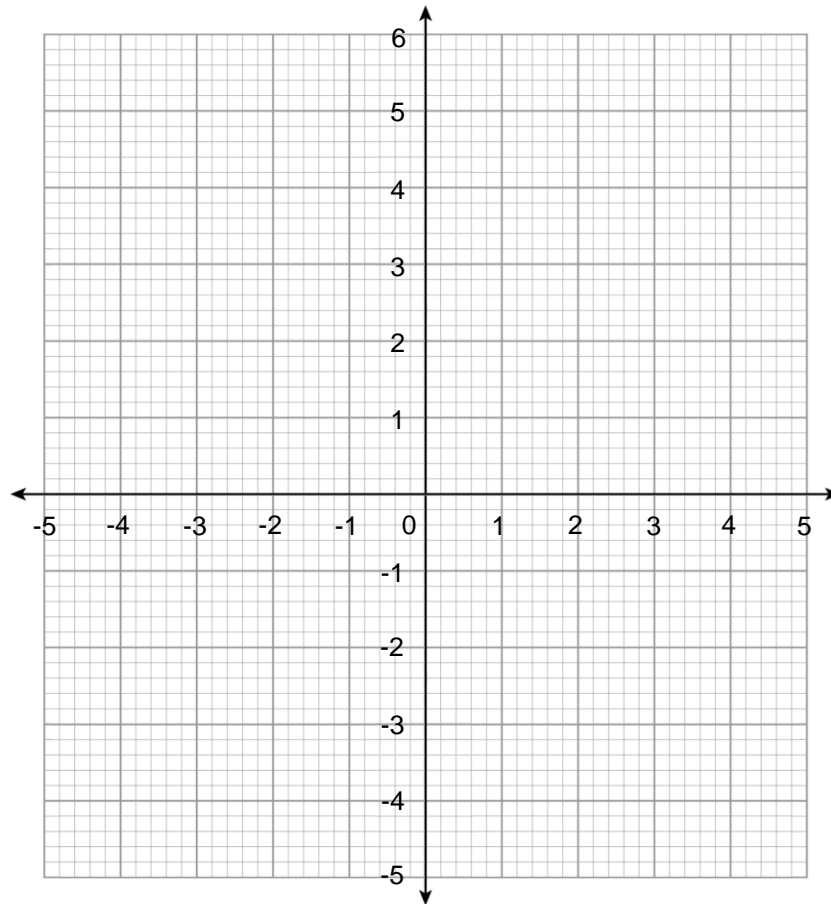**6**   The x-intercept of a line with gradient ½ is 3.   *(Level 4)*

By drawing the line on the axes below, find the y-intercept.

[2 marks]

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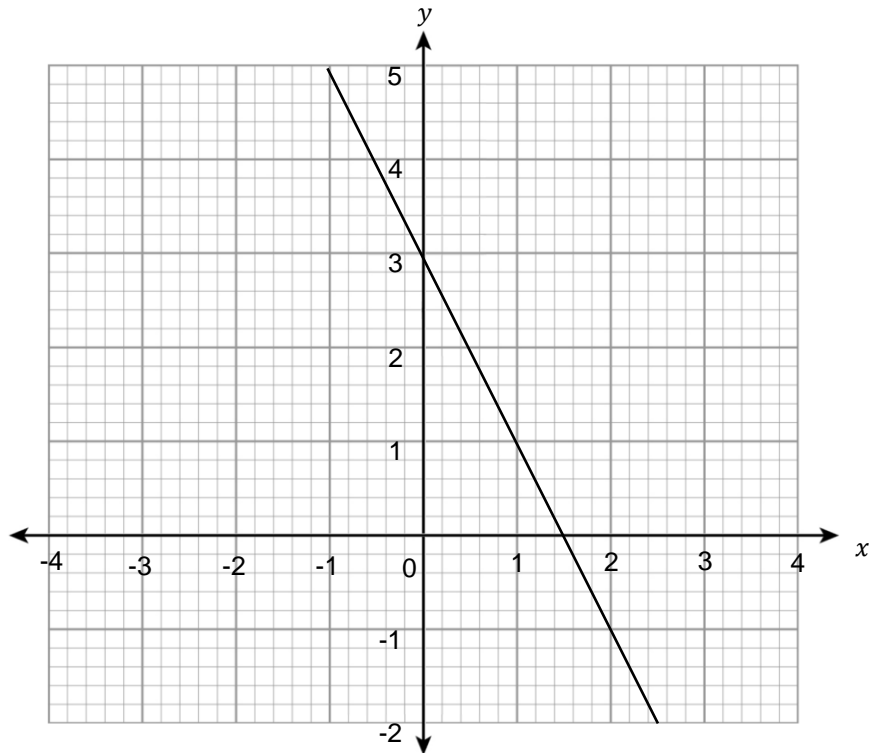⊘ Thousands of practice questions

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2

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7   Adam draws the line y-2x=3 on the axes below but makes an error.   *(Level 4)*

7(a)   Describe the error Adam has made.

[1 mark]

_____

_____

7(b)   What line has he actually plotted?

[1 mark]

_____

Answer   _____

7(c)   Plot the correct graph of the line $y - 2x = 3$ on the same axes.
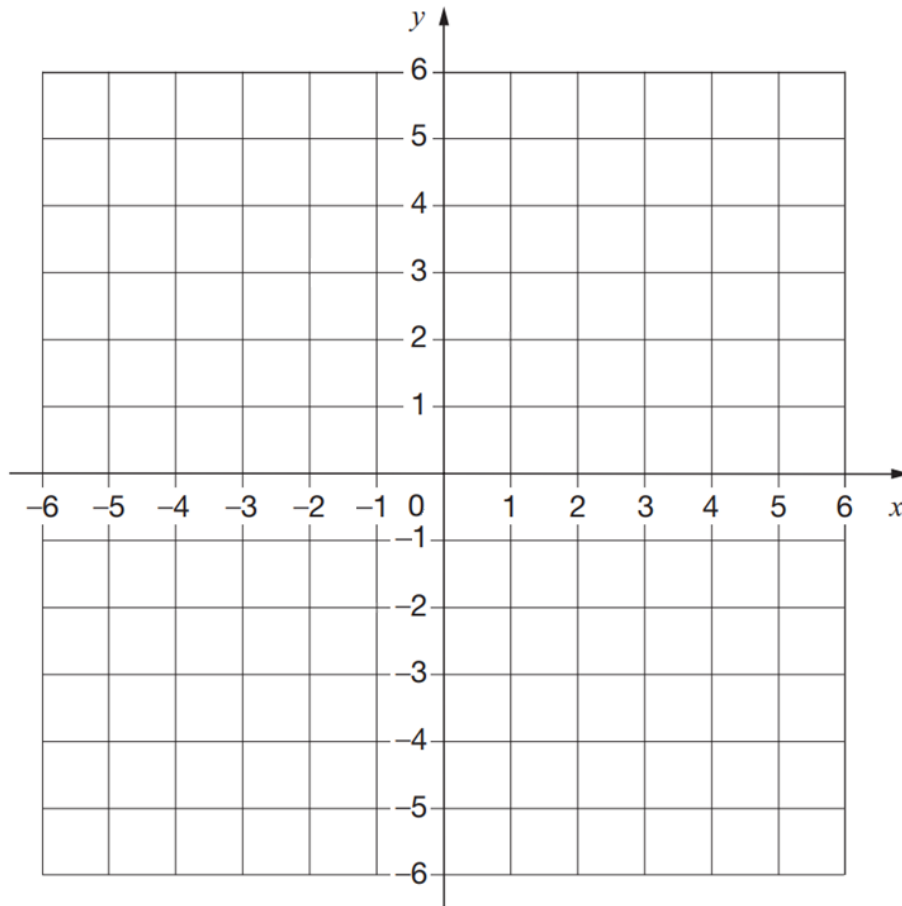
[2 marks]

_____

_____

Turn over for next question

4

Turn over ►

8(a) Plot the graphs of $y = \frac{1}{2}x + 3$ and $y = \frac{3}{2}x - 3$ on the axes below. *(Level 5)*

[4 marks]

8(b) What is the point of intersection of the two lines?

[1 mark]

Answer _____

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9(a) On the axes below, draw the lines *(Level 5)*

$$x = -3$$

$$y = 3$$

$$2y = x + 1$$

[4 marks]

9(b) Write down a point inside the region that is bounded by your three lines.

[1 mark]

Answer _____

End of Questions

5

END

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