
A24 Straight Line Graphs...

Using table of values

OCR

(a) (i) Complete this table for $y = 3x - 5$.

x	0	1	2	3
y	-5		1	

(ii) Draw the graph of $y = 3x - 5$ on the grid below.

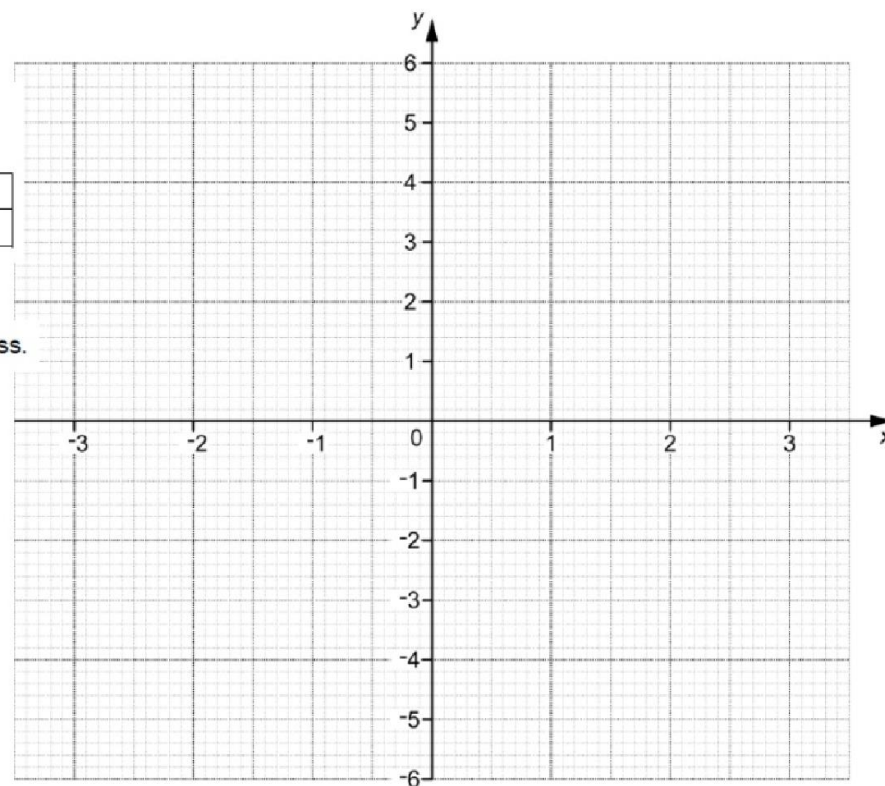
(b) (i) Complete this table for $y = x^2 - 4$.

x	-3	-2	-1	0	1	2	3
y		0	-3		-3		

(ii) Draw the graph of $y = x^2 - 4$ on the grid

(c) Write down the x -coordinates of the points where $y = 3x - 5$ and $y = x^2 - 4$ cross.

(c) $x = \dots\dots\dots$ and $x = \dots\dots\dots$ [2]



(a) (i) Complete this table for $y = 3x - 5$.

x	0	1	2	3
y	-5	-2	1	4

(ii) Draw the graph of $y = 3x - 5$ on the grid below. ✓

(b) (i) Complete this table for $y = x^2 - 4$.

x	-3	-2	-1	0	1	2	3
y	5	0	-3	-4	-3	0	5

(ii) Draw the graph of $y = x^2 - 4$ on the grid ✓

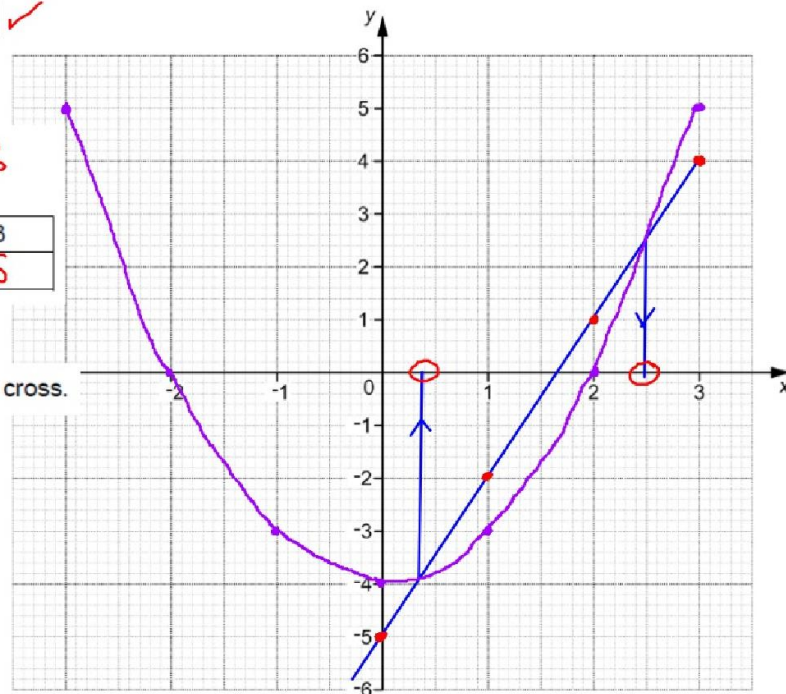
(c) Write down the x-coordinates of the points where $y = 3x - 5$ and $y = x^2 - 4$ cross.

(c) $x = 0.4$ ✓ and $x = 2.5$ ✓ [2]

0.4 ✓

2.6

± 0.1 away

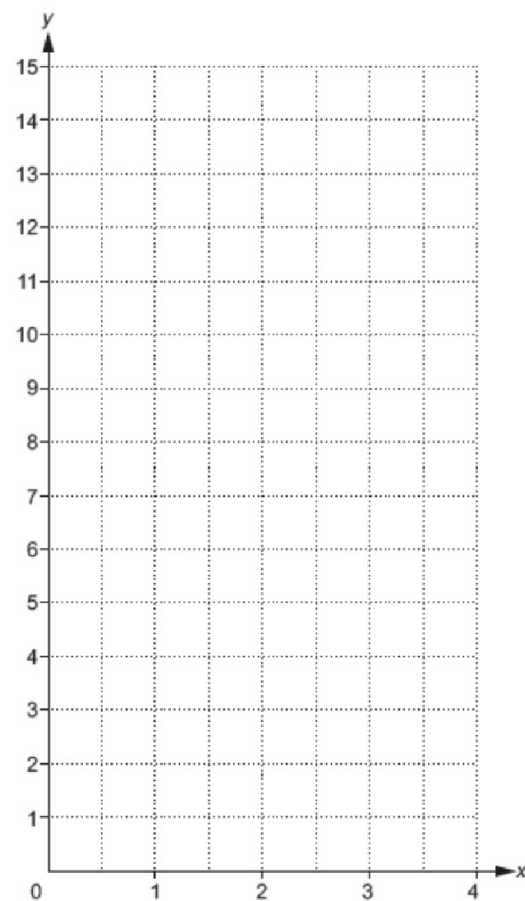


11 (a) Complete this table for $y = 3x + 2$.

x	0	1	2	3	4
y	2		8		14

[1]

(b) On the grid below, draw the graph of $y = 3x + 2$ for values of x from 0 to 4.



(c) Write down an equation for a line parallel to the line $y = 3x + 2$.

- 11 (a) Complete this table for $y = 3x + 2$.

x	0	1	2	3	4
y	2	5	8	11	14

- (b) On the grid below, draw the graph of $y = 3x + 2$ for values of x from 0 to 4.

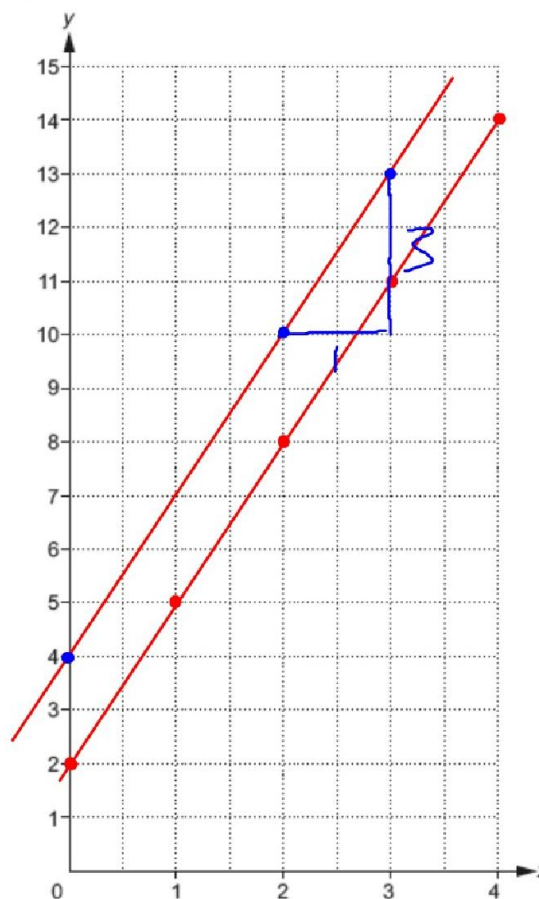
[1]

$$\frac{v}{h} = \frac{3}{1} = 3$$

gradient

- (c) Write down an equation for a line parallel to the line $y = 3x + 2$.

$$y = 3x + 4$$



5 (a) Complete this table for $y = x^2 + x - 4$.

A35

x	-4	-3	-2	-1	0	1	2	3
y		2		-4	-4		2	

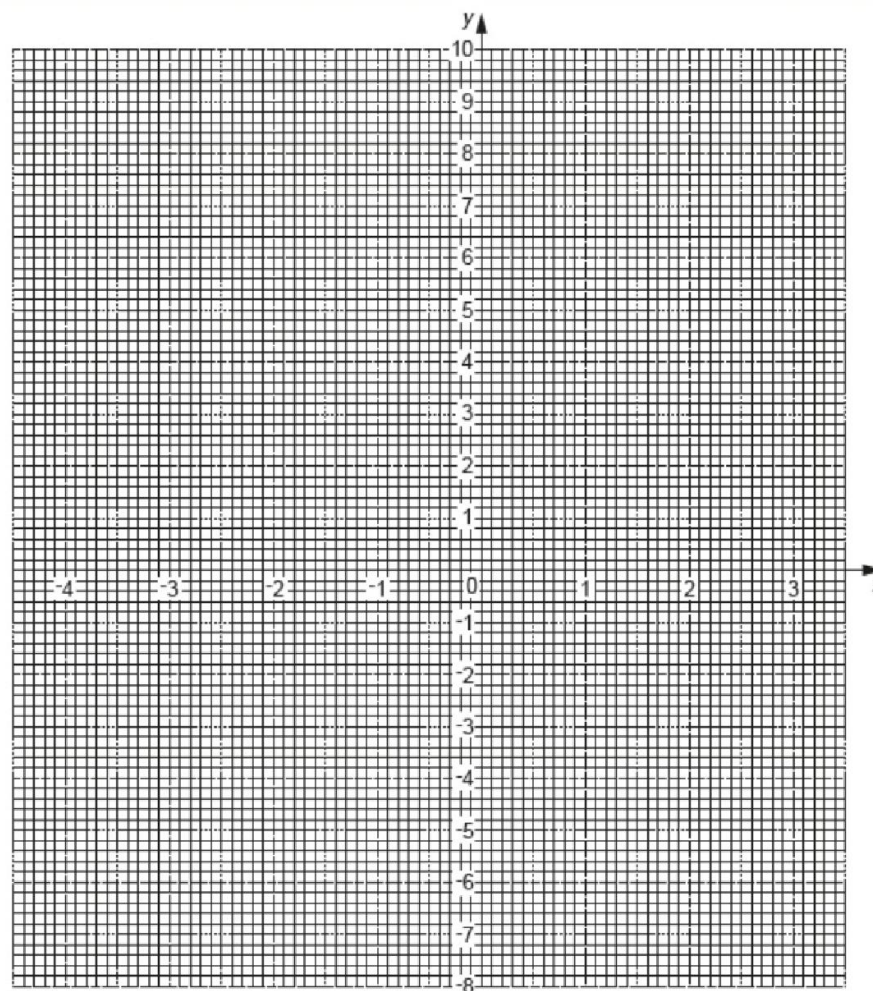
(b) Draw the graph of $y = x^2 + x - 4$ for $-4 \leq x \leq 3$.

A35

(c) Use your graph to solve $x^2 + x - 4 = 0$.

A36

(c) $x = \dots\dots\dots$ or $x = \dots\dots\dots$ [2]



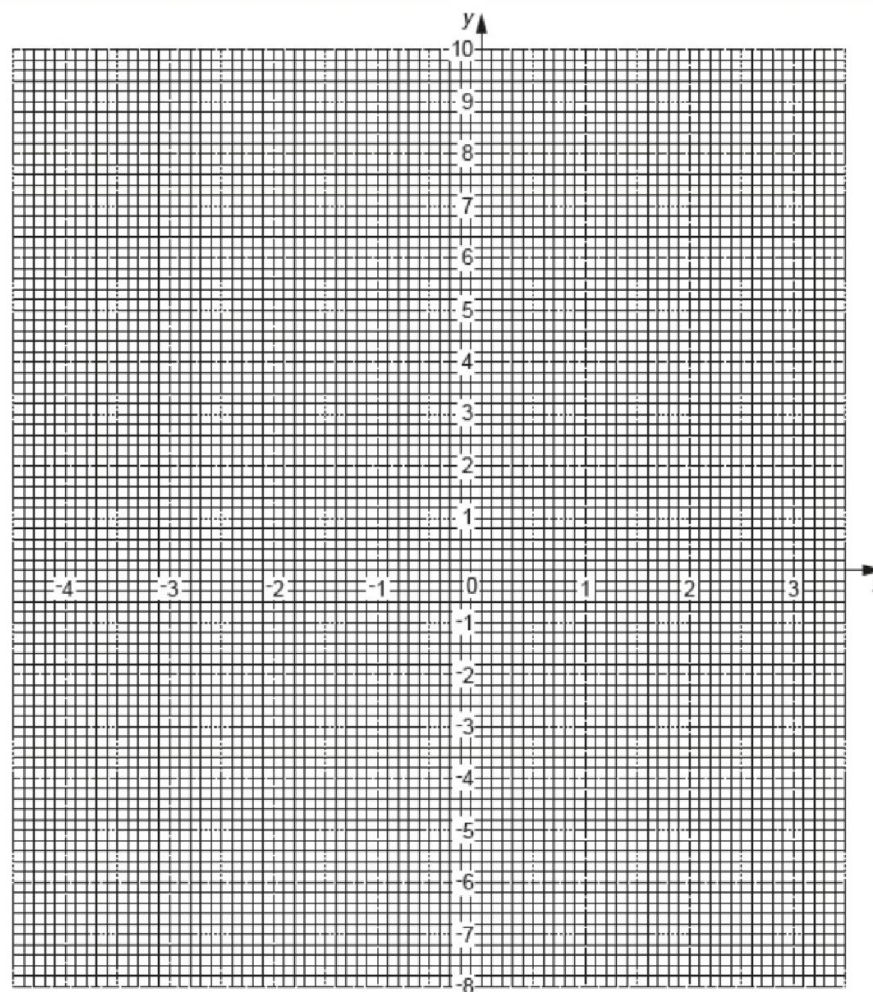
- (d) On the same grid, draw the graph of $y = -2x - 1$ for $-4 \leq x \leq 3$.
You may use the table if you wish.

A24
A25

x	-4		
y	7		

- (e) Use your graphs to solve the equation $x^2 + x - 4 = -2x - 1$.

(e) $x = \dots\dots\dots$ or $x = \dots\dots\dots$ [2]



5 (a) Complete this table for $y = x^2 + x - 4$.

A35

x	-4	-3	-2	-1	0	1	2	3
y	8	2	-2	-4	-4	-2	2	8

$$\begin{aligned} &3^2 + 3 - 4 \\ &9 + 3 - 4 \end{aligned}$$

(b) Draw the graph of $y = x^2 + x - 4$ for $-4 \leq x \leq 3$.

A35

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

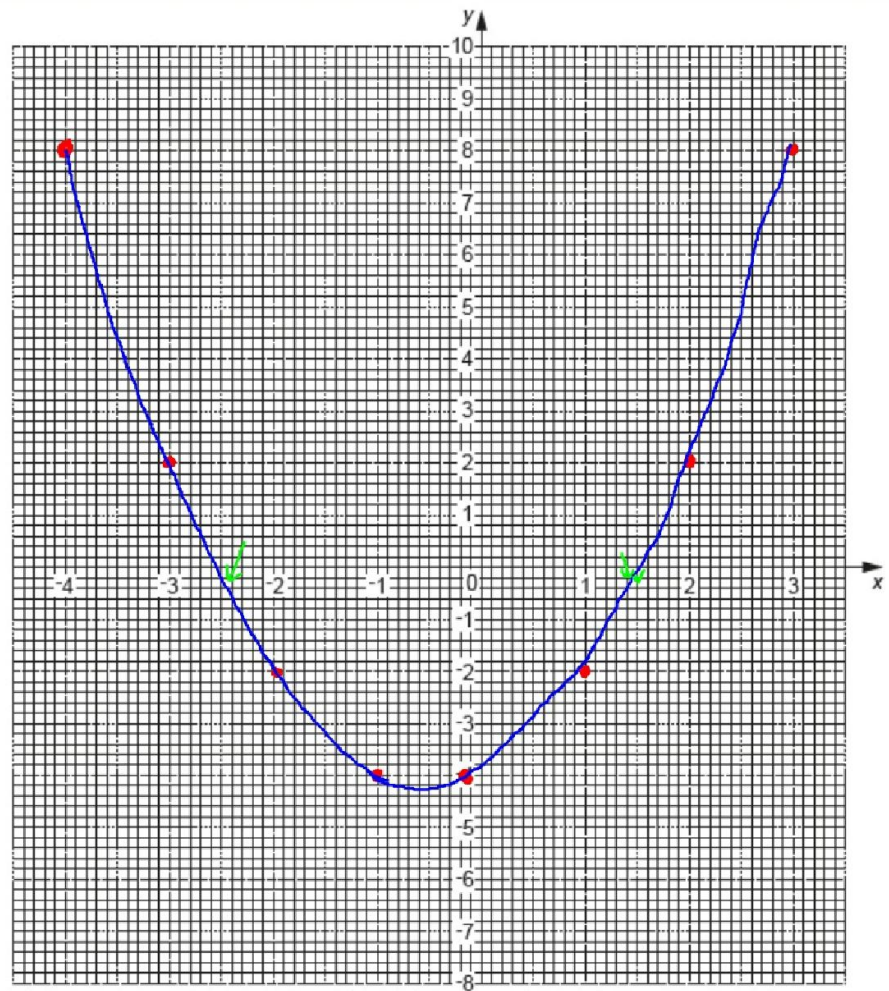
(c) Use your graph to solve $x^2 + x - 4 = 0$.

A36

$$y = 0$$

(c) $x = -2.5$ or $x = 1.5$ [2]

$-2.5 \rightarrow -2.7$ $1.5 \rightarrow 1.7$



- (d) On the same grid, draw the graph of $y = -2x - 1$ for $-4 \leq x \leq 3$. You may use the table if you wish.

A24
A25

x	-4	0	3
y	7	-1	-7

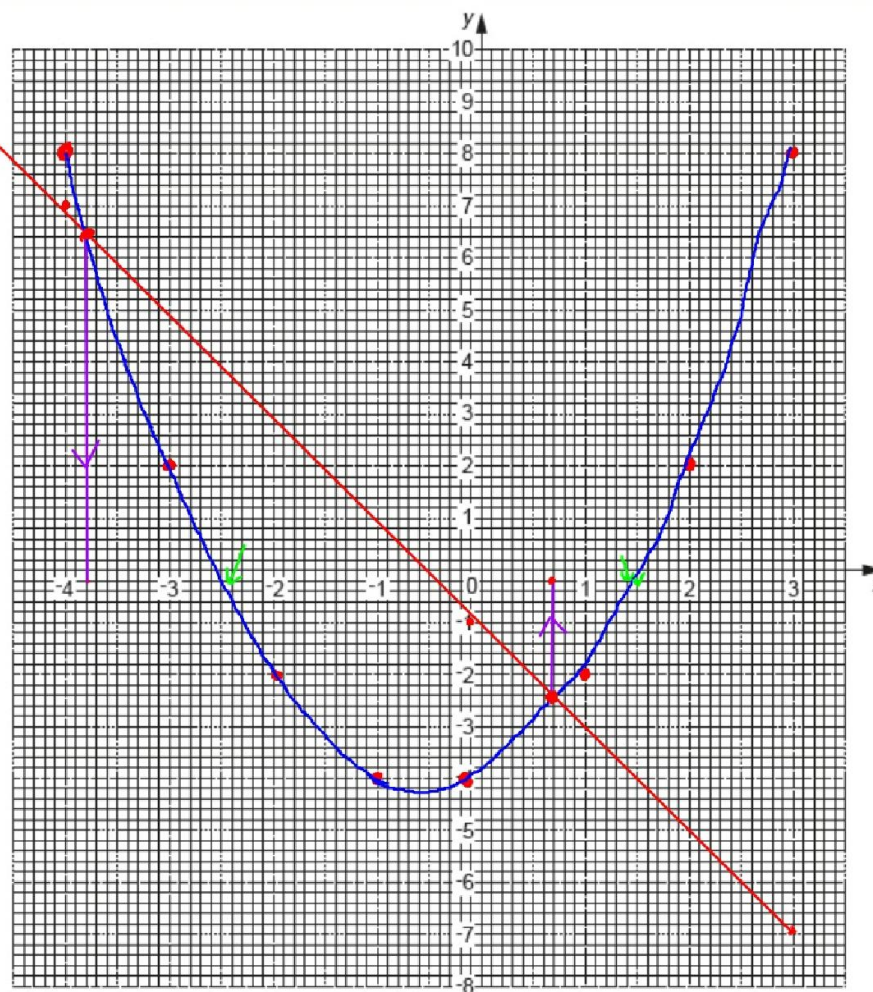
$$\begin{aligned} -2 \times 3 \\ = -6 - 1 \\ = -7 \end{aligned}$$

- (e) Use your graphs to solve the equation $x^2 + x - 4 = -2x - 1$.

(e) $x = \dots\dots\dots$ or $x = \dots\dots\dots$ [2]

$-3.7 \rightarrow -3.9$

$0.7 - 0.9$

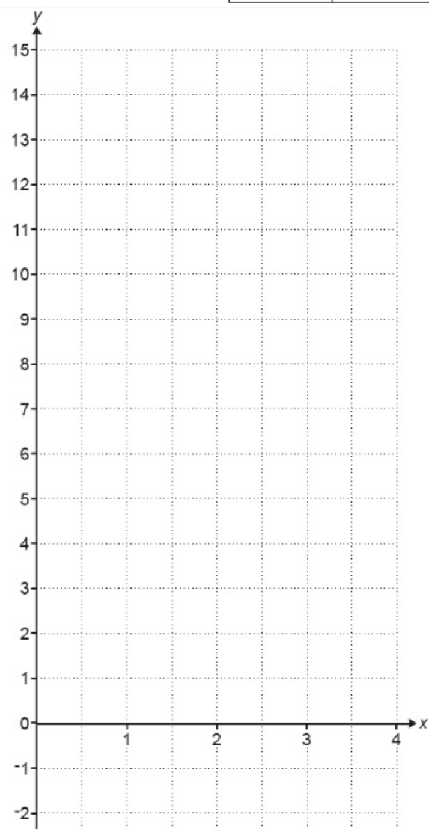


17 (a) Complete this table for $y = 4x - 2$.

A24

x	0	1	2	3	4
y	-2	2	6		14

[1]

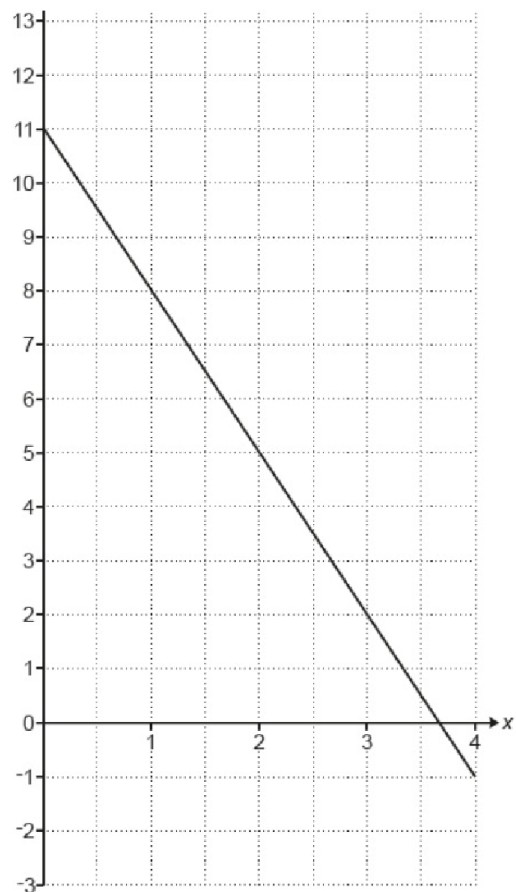


(b) On the grid below, draw the graph of $y = 4x - 2$ for values of x from 0 to 4. [2]

A24

(c) The diagram below shows part of another straight line.

A25



Find the equation of this straight line.

(c) [3]

17 (a) Complete this table for $y = 4x - 2$.

A24

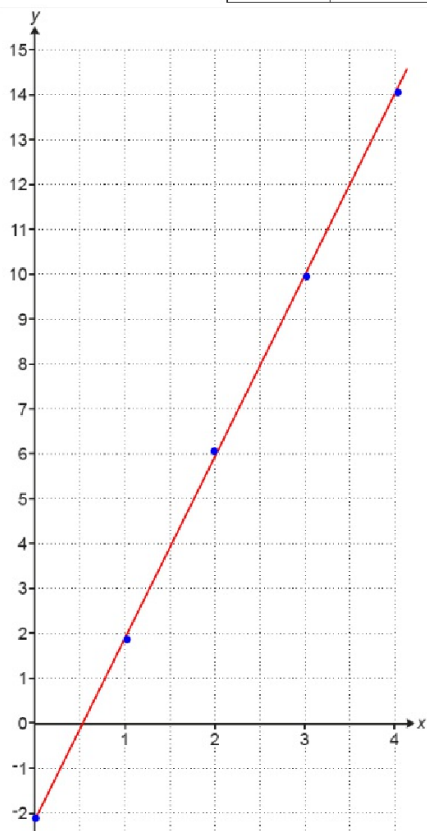
x	0	1	2	3	4
y	-2	2	6	10	14

$$4(3) - 2 \\ 12 - 2 = 10$$

[1]

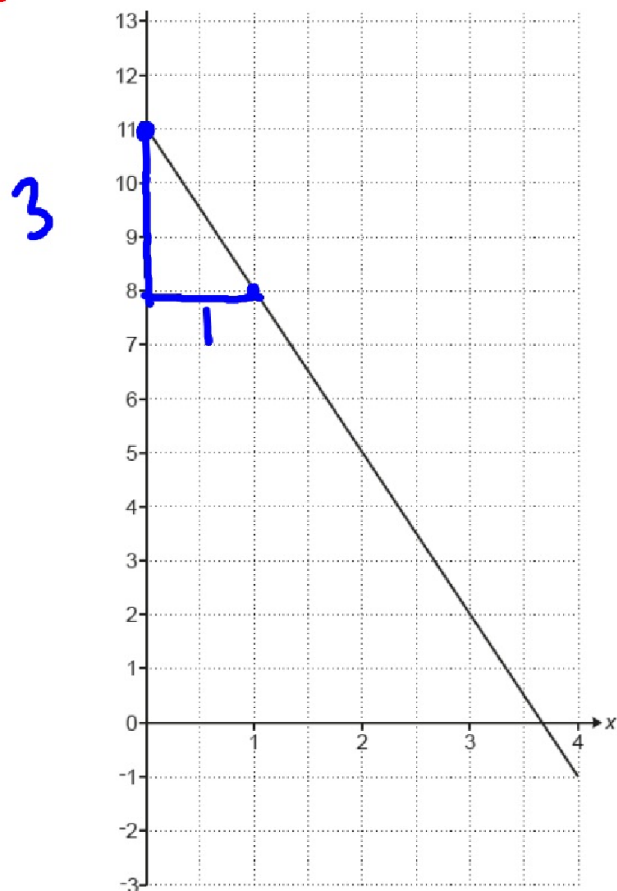
(b) On the grid below, draw the graph of $y = 4x - 2$ for values of x from 0 to 4. [2]

A24



(c) The diagram below shows part of another straight line.

A25



Find the equation of this straight line.

$$y = mx + c$$

gradient $m = -\frac{3}{1} = -3$

y-intercept $c = +11$

$$y = -3x + 11$$

(c) [3]

13 (a) (i) Sketch the graph of $y = 2$.

G39

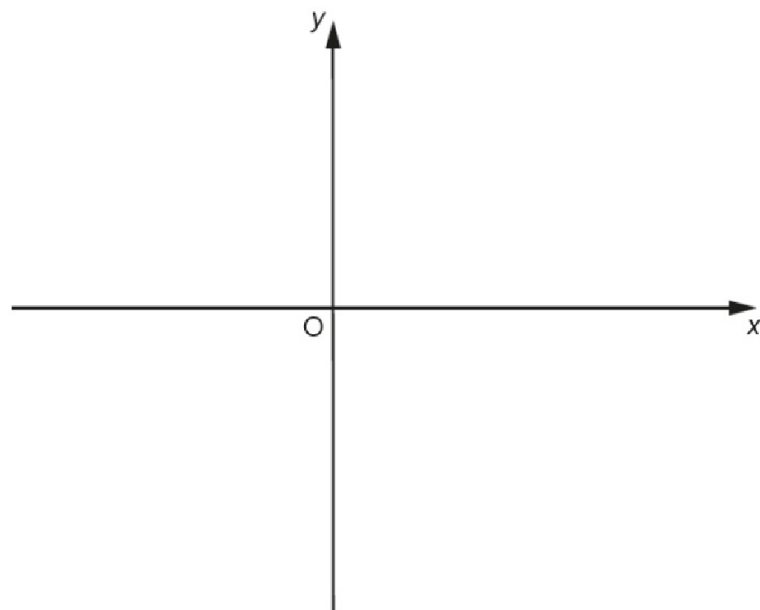


[2]

(ii) Sketch the graph of $y = x + 1$. [2]

A24

A25



(iii) Ceri says that the graphs of $y = 2$ and $y = x + 1$ cross at the point $(2, 3)$.

Explain the error in her answer.

.....

13 (a) (i) Sketch the graph of $y = 2$.

G39

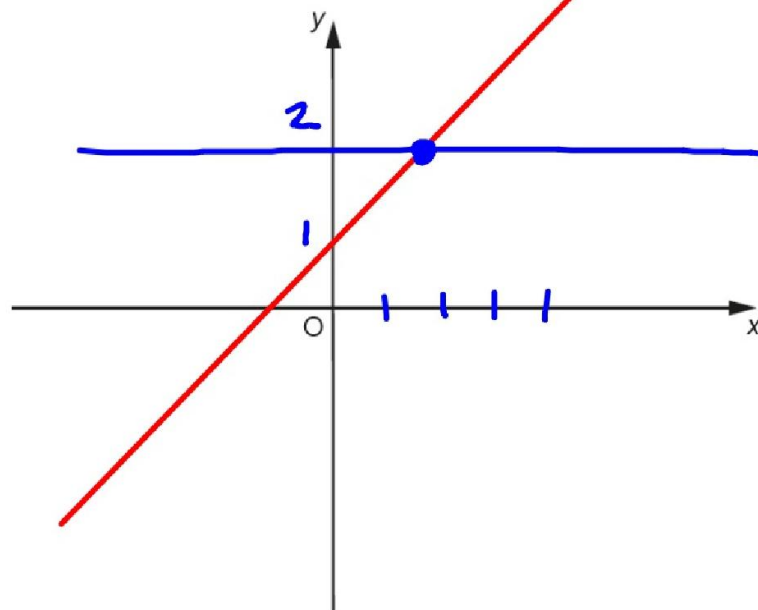


[2]

(ii) Sketch the graph of $y = x + 1$. [2]

A24

A25



x	0	1	2	3	4
y	1	2	3	4	5

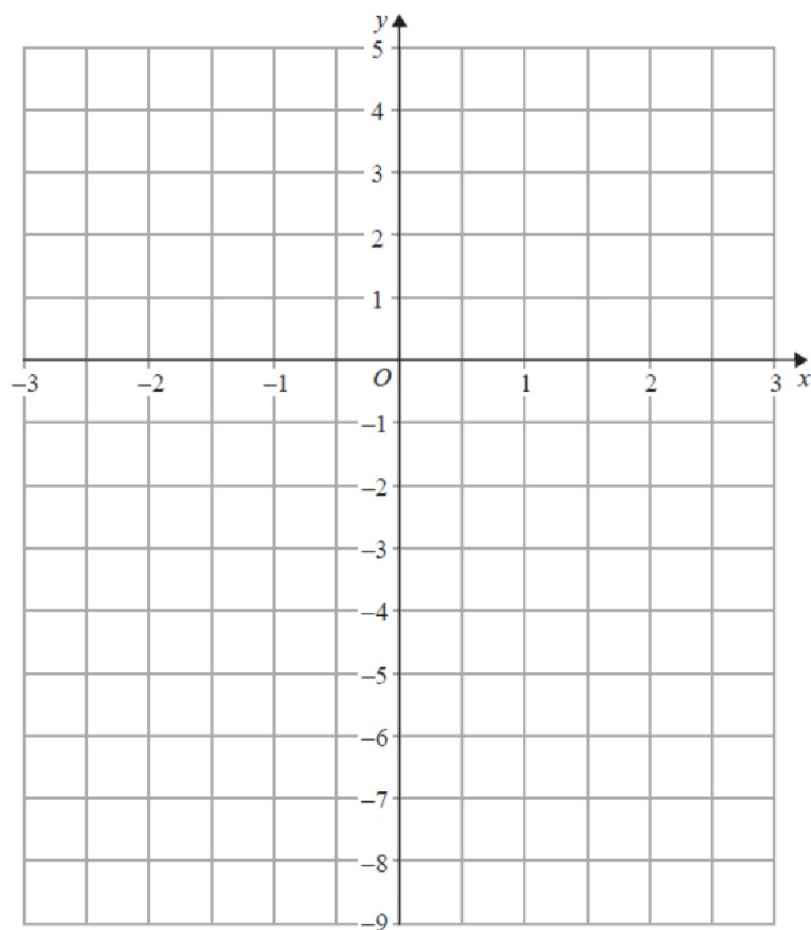
(iii) Ceri says that the graphs of $y = 2$ and $y = x + 1$ cross at the point $(2, 3)$.

Explain the error in her answer.

Where they cross must have $y = 2$

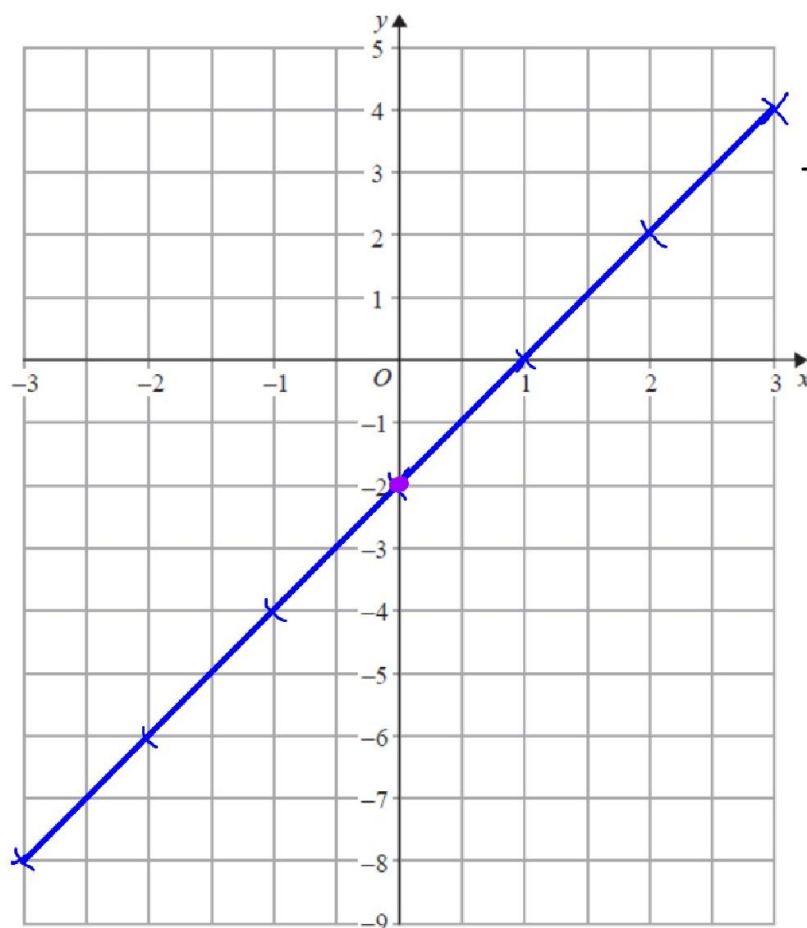
Edexcel

14 On the grid, draw the graph of $y = 2x - 2$ for values of x from -3 to 3



(Total for Question 14 is 3 marks)

14 On the grid, draw the graph of $y = 2x - 2$ for values of x from -3 to 3



table

x	-3	-2	-1	0	1	2	3
y	-8	-6	-4	-2	0	2	4

$$y = mx + c$$

$\downarrow$ gradient $\downarrow$ y-intercept

$$\frac{v}{h} = \frac{2}{1}$$

(Total for Question 14 is 3 marks)

17 (a) Complete the table of values for $y = 2x - 1$

A24

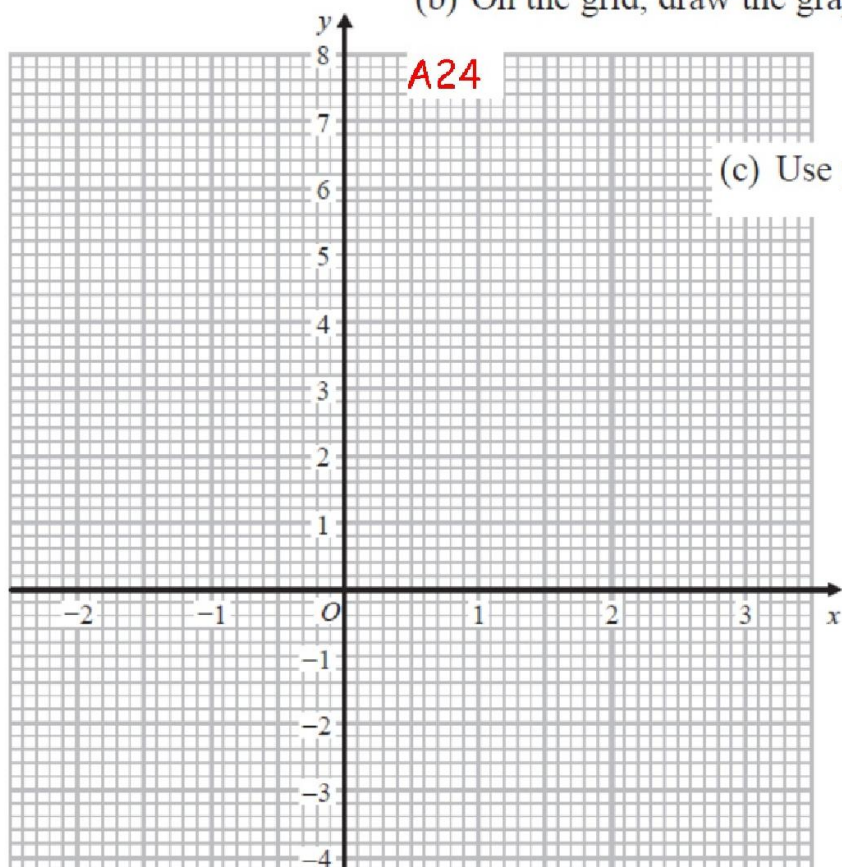
x	-2	-1	0	1	2	3
y		-3				5

(2)

(b) On the grid, draw the graph of $y = 2x - 1$ for values of x from -2 to 3

(2)

A24

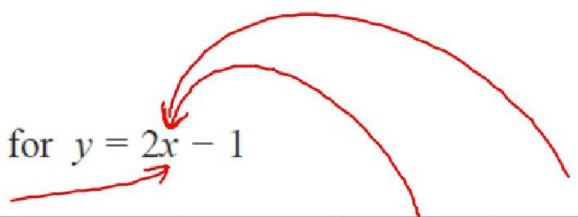


(c) Use your graph to find the value of x when $y = 0.4$

.....
(1)

17 (a) Complete the table of values for $y = 2x - 1$

A24



x	-2	-1	0	1	2	3
y	-5	-3	-1	1	3	5

(2)

$$\begin{aligned} & -2 \times 2 - 1 \\ & -4 - 1 \\ & = -5 \end{aligned}$$

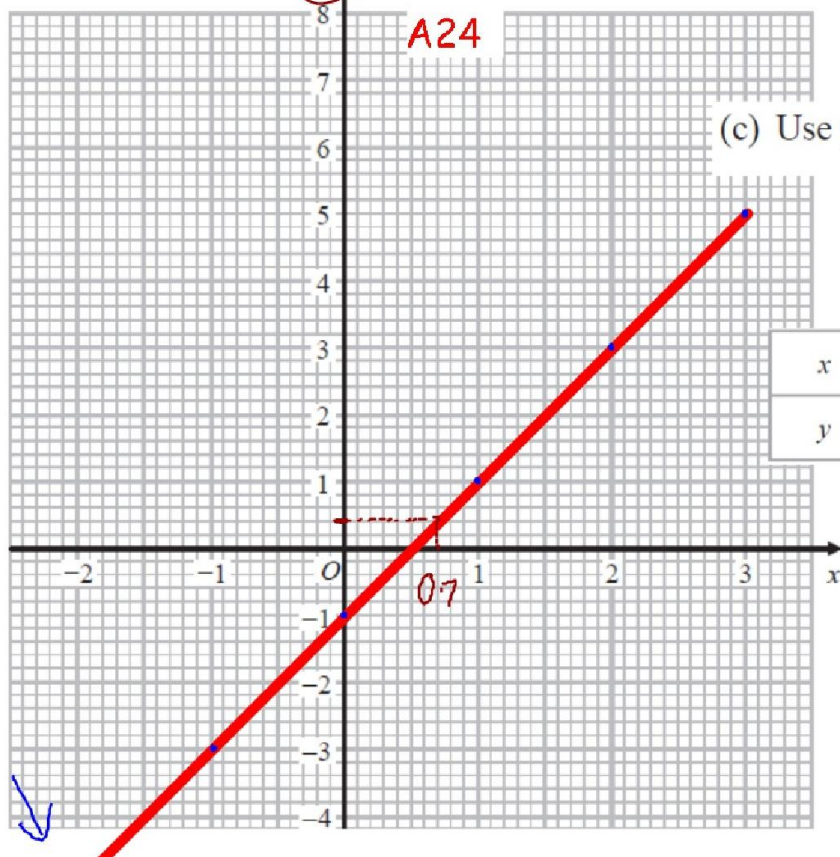
(b) On the grid, draw the graph of $y = 2x - 1$ for values of x from -2 to 3

(2)

A24

(c) Use your graph to find the value of x when $y = 0.4$

0.7 ✓
(1)



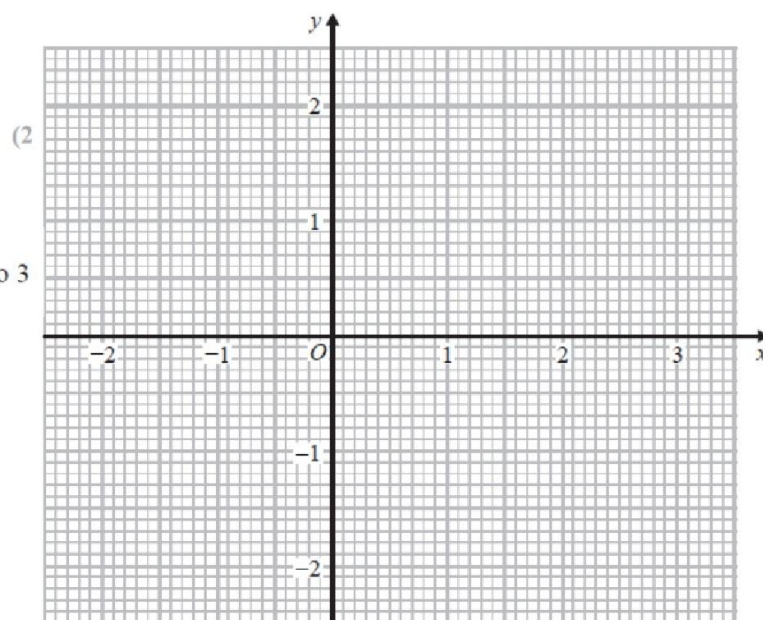
x	-2	-1	0	1	2	3
y	-5	-3	-1	1	3	5

13 (a) Complete the table of values for $y = \frac{1}{2}x - 1$

x	-2	-1	0	1	2	3
y	-2				0	

(b) On the grid, draw the graph of $y = \frac{1}{2}x - 1$ for values of x from -2 to 3

(c) Use your graph to find the value of x when $y = 0.3$



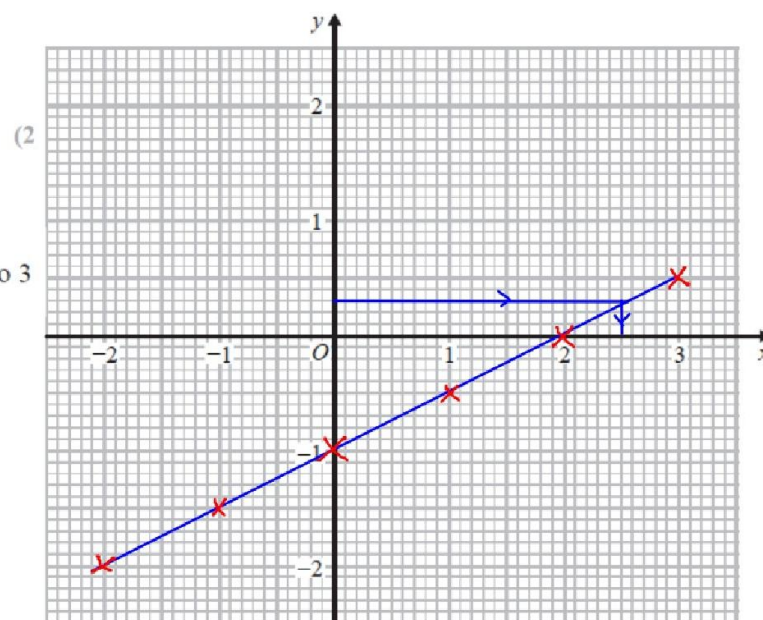
13 (a) Complete the table of values for $y = \frac{1}{2}x - 1$

x	-2	-1	0	1	2	3
y	-2	-1.5	-1	-0.5	0	0.5

$$3 \times \frac{1}{2} = 1\frac{1}{2} - 1 = \frac{1}{2}$$

$$1 \times \frac{1}{2} = \frac{1}{2} - 1 = -0.5$$

(b) On the grid, draw the graph of $y = \frac{1}{2}x - 1$ for values of x from -2 to 3



(c) Use your graph to find the value of x when $y = 0.3$

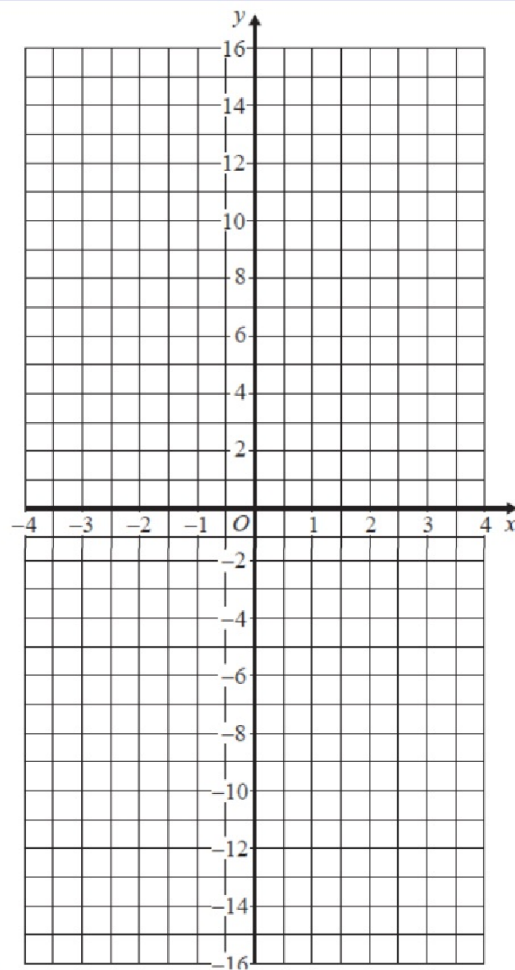
$$2.5 \checkmark$$

$$2.5, 2.6, 2.7 \checkmark$$

25 On the grid below, draw the graph of $y = 1 - 4x$ for values of x from -3 to 3

A24

A25



(Total for Question 25 is 3 marks)

25 On the grid below, draw the graph of $y = 1 - 4x$ for values of x from -3 to 3

A24

A25

x	-3	-2	-1	0	1	2	3
y	13	9	5	1	-3	-7	-11

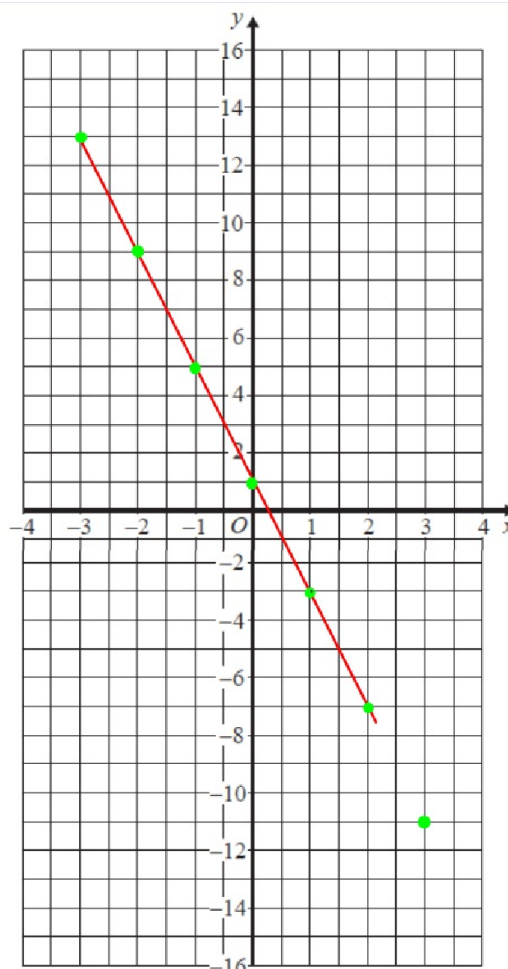
$$1 - (4x - 1)$$

$$1 - -4$$

$$1 + 4$$

$$y = mx + c$$

$$y = -4x + 1$$

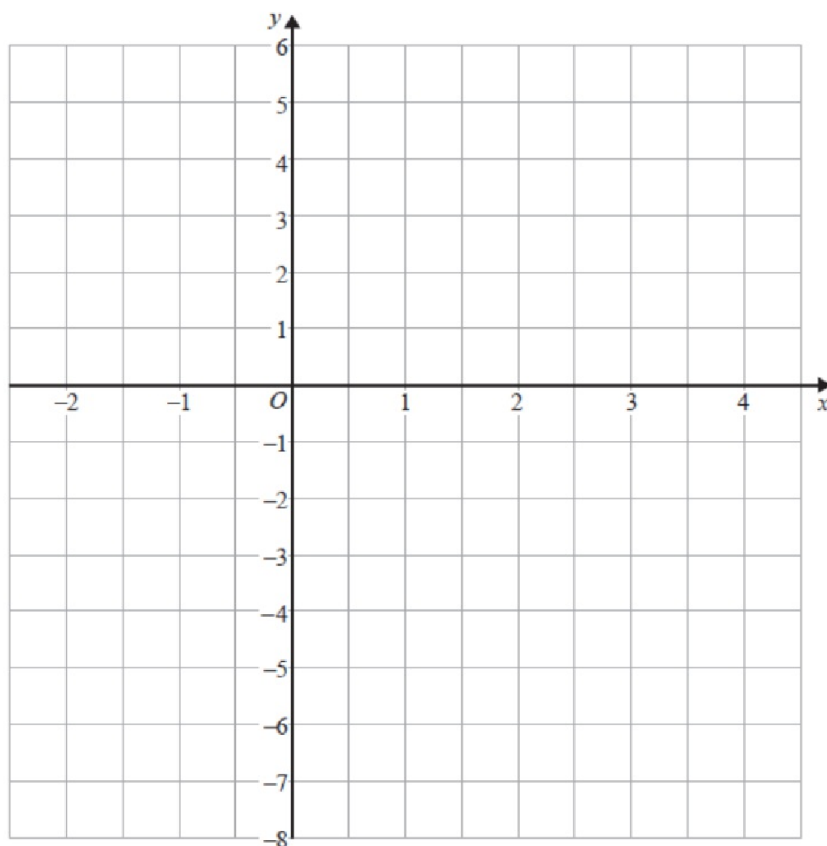


(Total for Question 25 is 3 marks)

21 On the grid below, draw the graph of $y = 2x - 3$ for values of x from -2 to 4

A24

A25

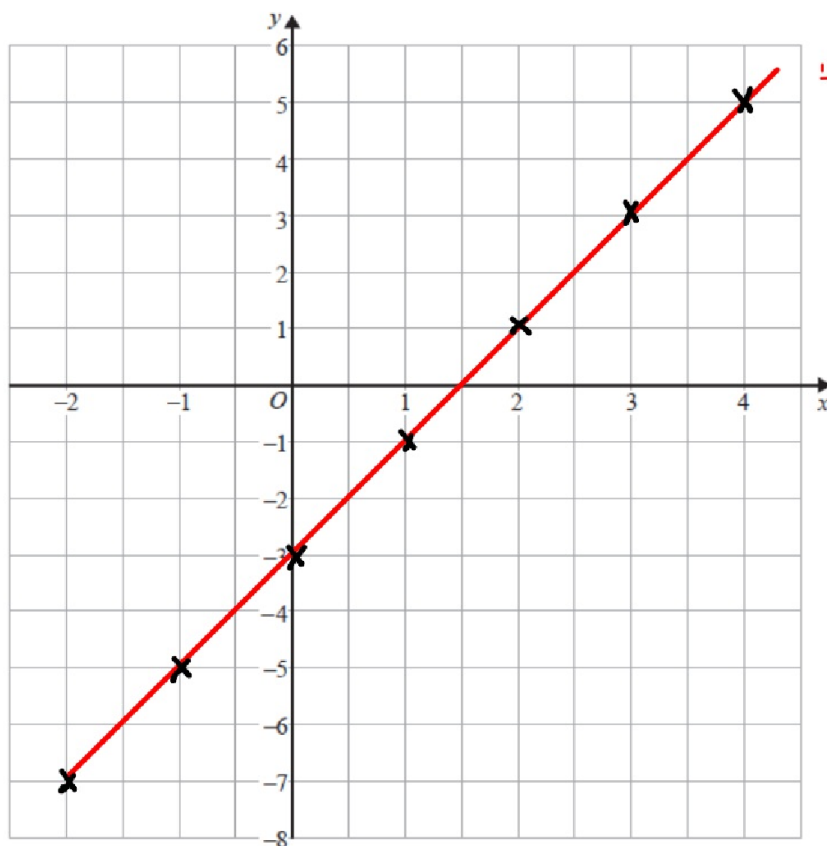


(Total for Question 21 is 3 marks)

21 On the grid below, draw the graph of $y = 2x - 3$ for values of x from -2 to 4

A24

A25



x	-2	-1	0	1	2	3	4
y	-7	-5	-3	-1	1	3	5

$$y = mx + c$$

$\begin{matrix} 2 & -3 \end{matrix}$
 $\begin{matrix} \sqrt{1} & \sqrt{2} \end{matrix}$

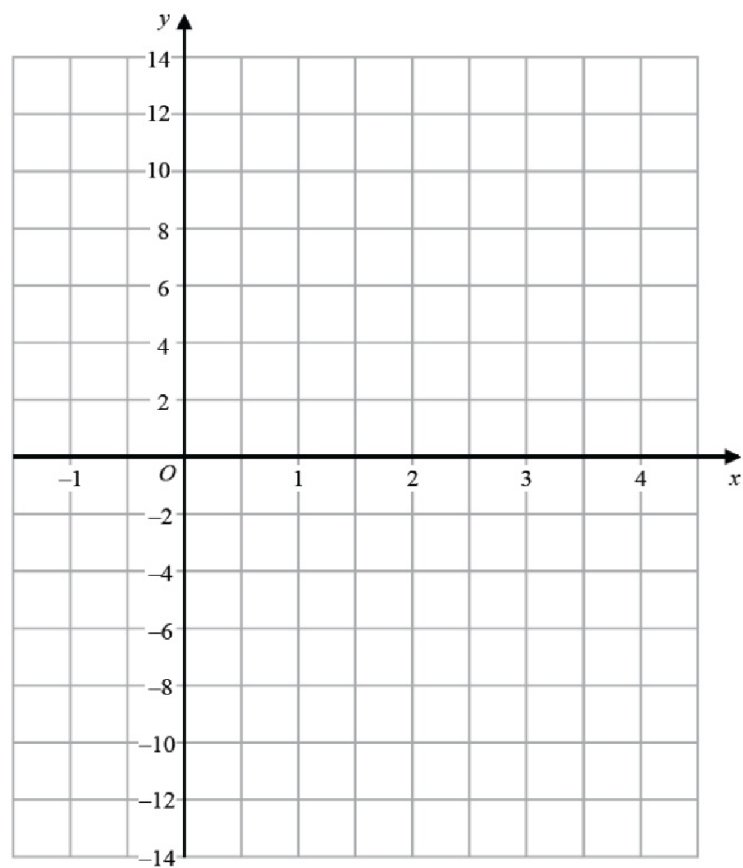
(Total for Question 21 is 3 marks)

17 (a) Complete the table of values for $y = 4x - 6$ (2)

A24

(b) On the grid, draw the graph of $y = 4x - 6$ for values of x from -1 to 4

x	-1	0	1	2	3	4
y			-2			10



(2)

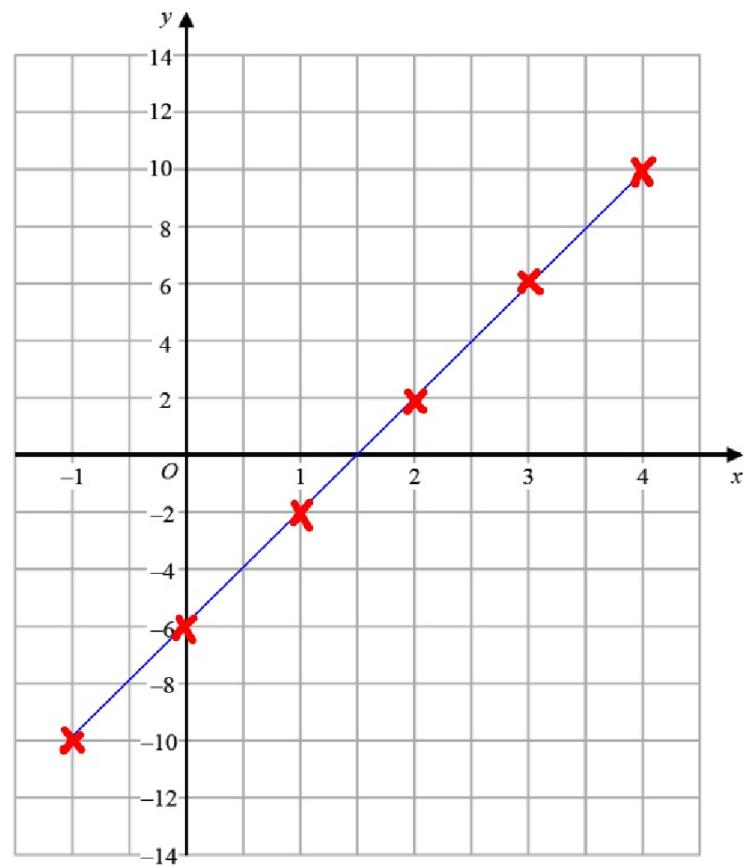
17 (a) Complete the table of values for $y = 4x - 6$ (2)

A24

$-4 - 6$

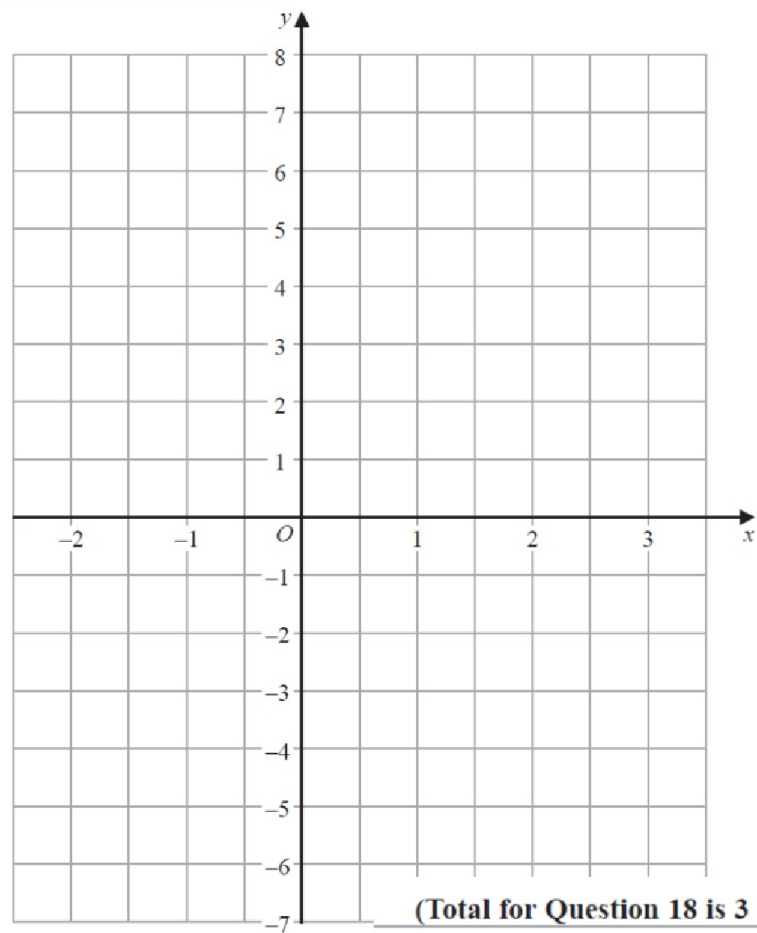
x	-1	0	1	2	3	4
y	-10	-6	-2	2	6	10

(b) On the grid, draw the graph of $y = 4x - 6$ for values of x from -1 to 4



18 On the grid below, draw the graph of $y = 2x - 2$ for values of x from -2 to 3

A24

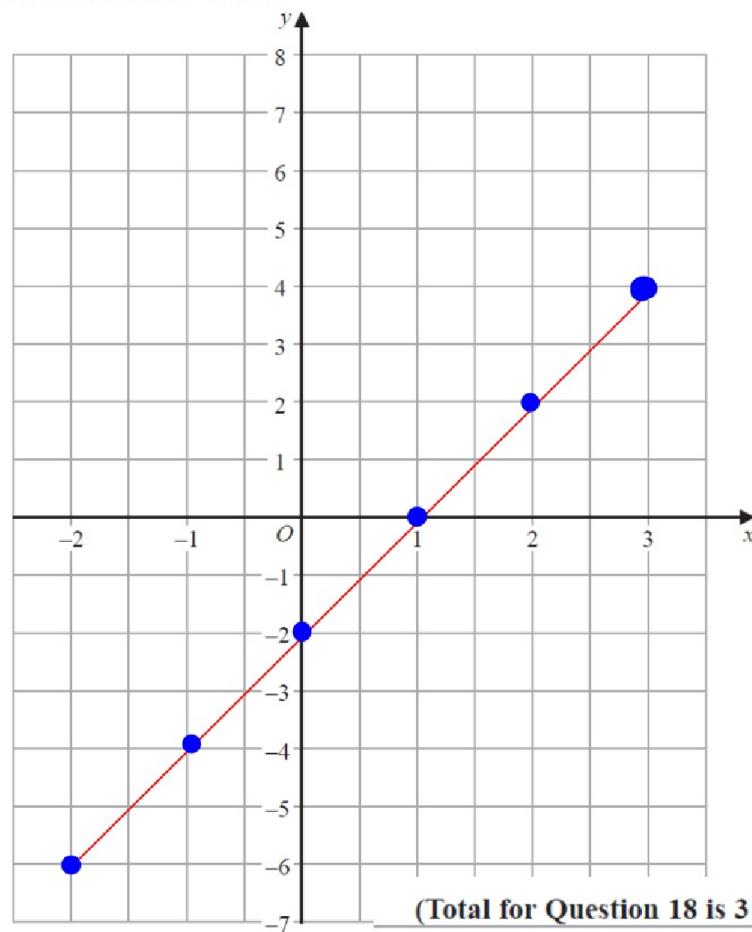


(Total for Question 18 is 3 marks)

18 On the grid below, draw the graph of $y = 2x - 2$ for values of x from -2 to 3

A24

x	-2	-1	0	1	2	3
y	-6	-4	-2	0	2	4



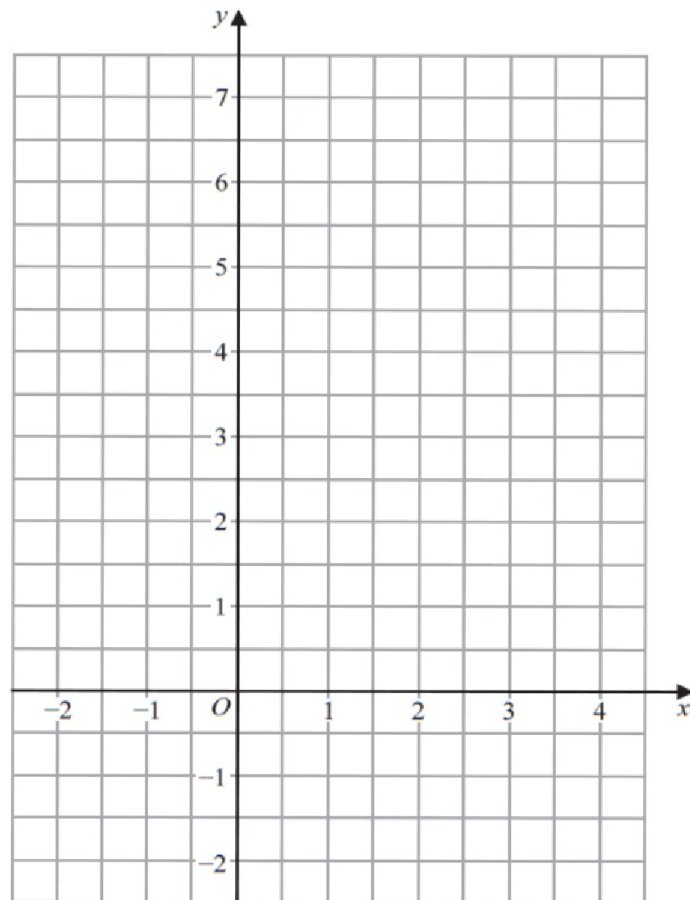
(Total for Question 18 is 3 marks)

17 On the grid below, draw the graph of $y = 4 - x$ for values of x from -2 to 4



A24

A25



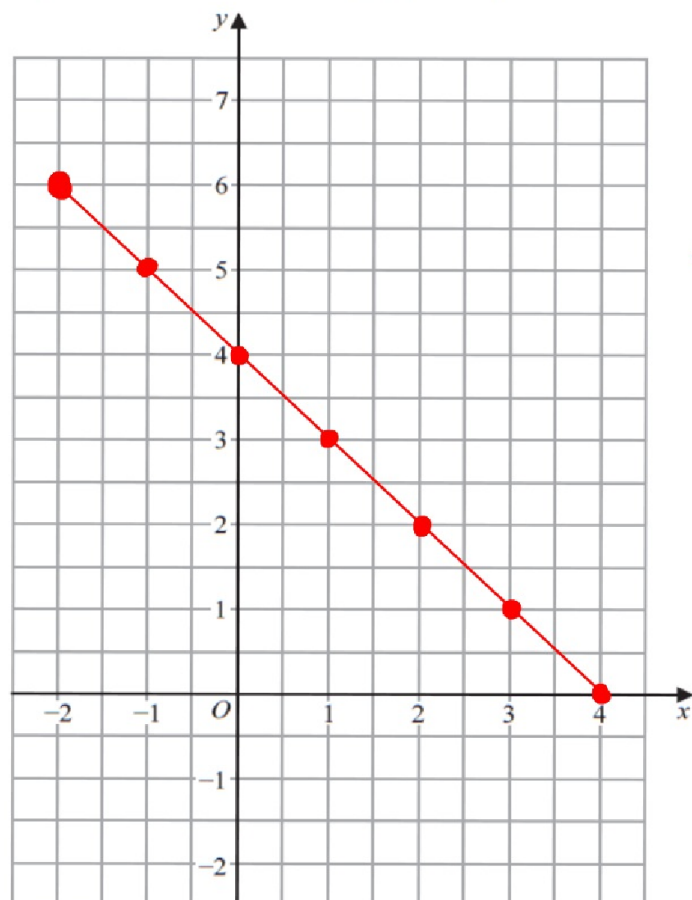
(Total for Question 17 is 3 marks)

17 On the grid below, draw the graph of $y = 4 - x$ for values of x from -2 to 4



A24

A25



x	-2	-1	0	1	2	3	4
y	6	5	4	3	2	1	0

$$4 - -1 = 5$$

$$4 - -2 = 6$$

or

$$y = mx + c$$

$$y = -1x + 4$$

grad y-int

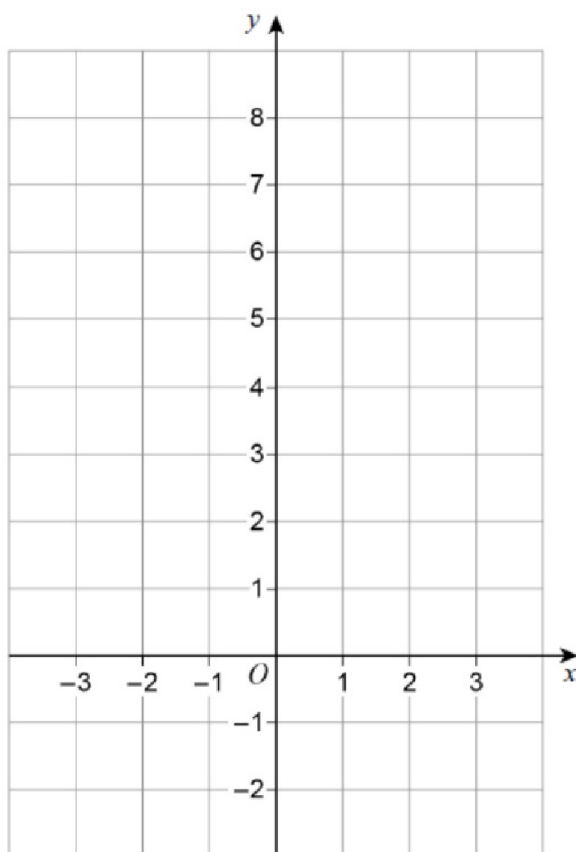
(Total for Question 17 is 3 marks)

AQA

16 (b) Draw the line $3x + 2y = 6$ for values of x from -3 to 3

[2 marks]

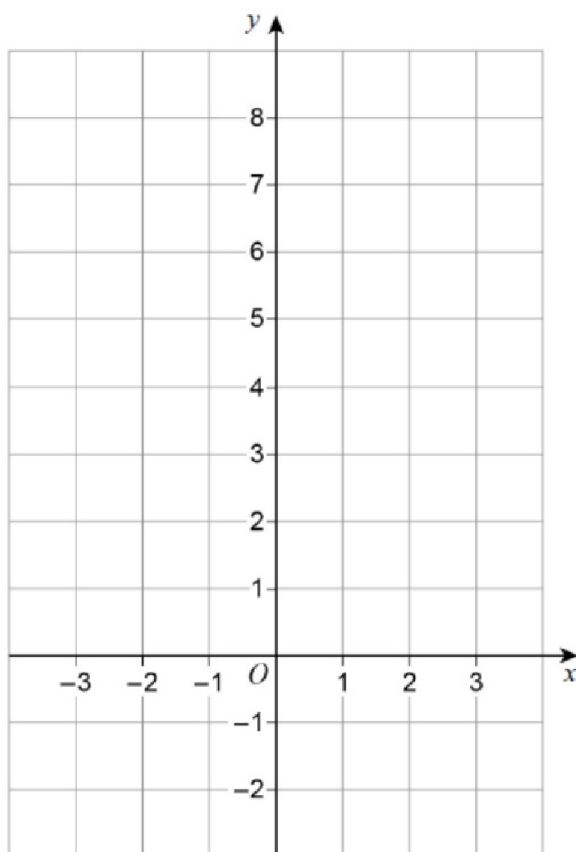
A24
A25



16 (b) Draw the line $3x + 2y = 6$ for values of x from -3 to 3

[2 marks]

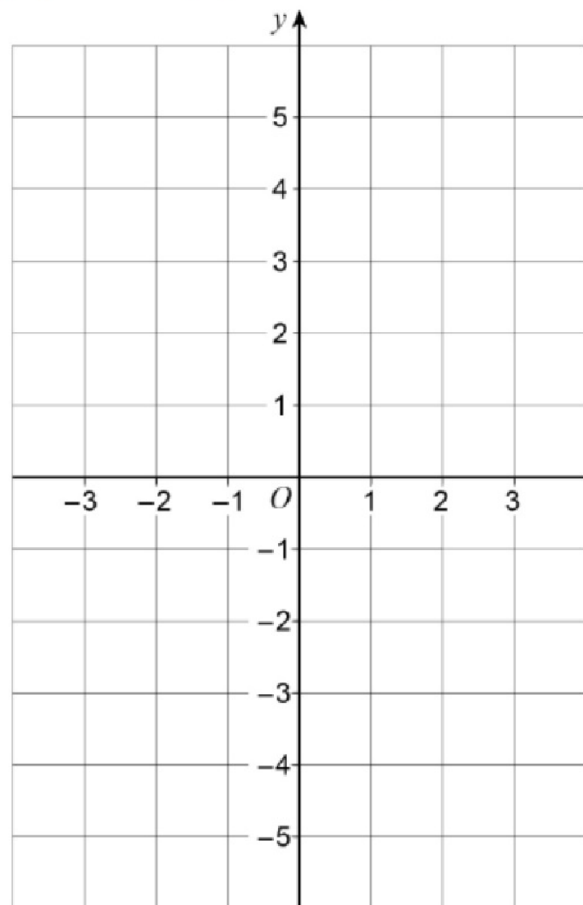
A24
A25



14 On the grid, draw the graph of $x + y = 2$ for values of x from -3 to 3

[2 marks]

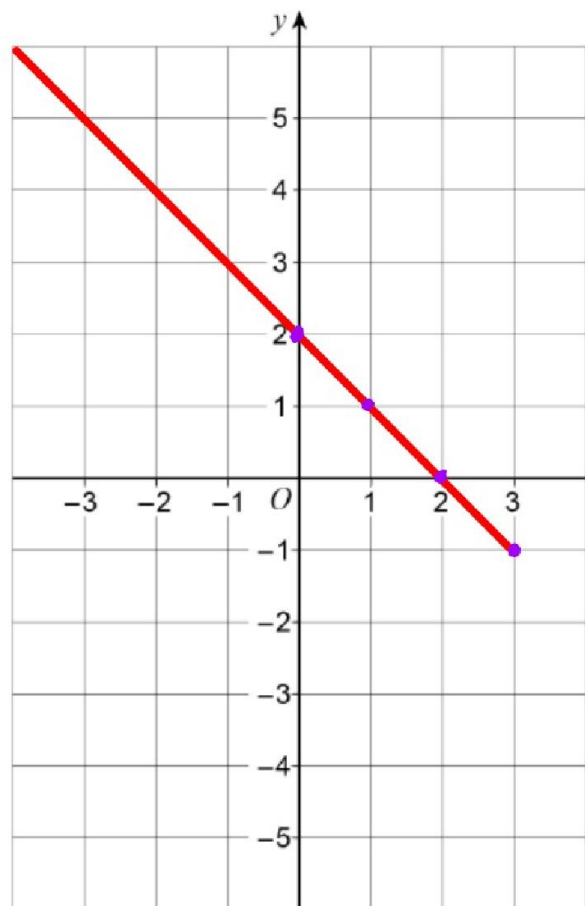
A24



14 On the grid, draw the graph of $x + y = 2$ for values of x from -3 to 3

[2 marks]

A24



$$\begin{matrix} x & y \\ (0, & 2) \end{matrix} = 2$$

$$(2, 0) = 2$$

$$(1, 1) = 2$$

$$(3, -1) = 2$$

x	-3	3
y		-1

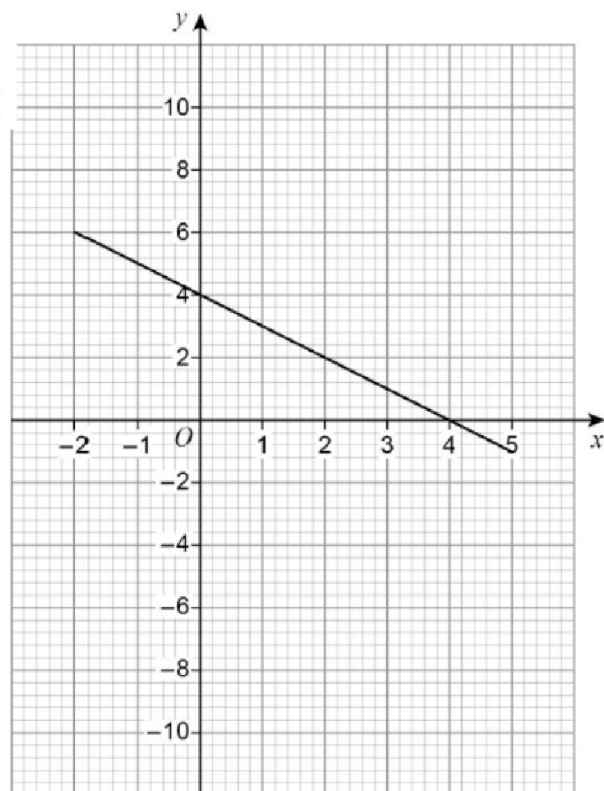
15 The graph of $y = 4 - x$ for values of x from -2 to 5 is shown on the grid.

15 (a) On the grid, draw the graph of $y = 2x - 5$ for values of x from -2 to 5

[3 marks]

A24

A25



15 (b) Use your graph to solve $2x - 5 = 4 - x$

[1 mark]

$x =$ _____

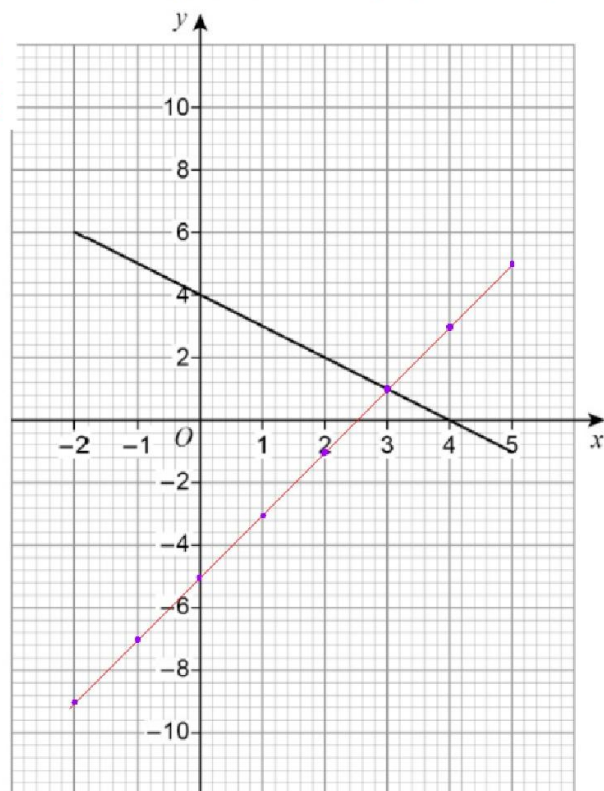
15 The graph of $y = 4 - x$ for values of x from -2 to 5 is shown on the grid.

15 (a) On the grid, draw the graph of $y = 2x - 5$ for values of x from -2 to 5

[3 marks]

A24

A25



x	-2	-1	0	1	2	3	4	5
y	-9	-7	-5	-3	-1	1	3	5

15 (b) Use your graph to solve

Cross
 $2x - 5 = 4 - x$

[1 mark]

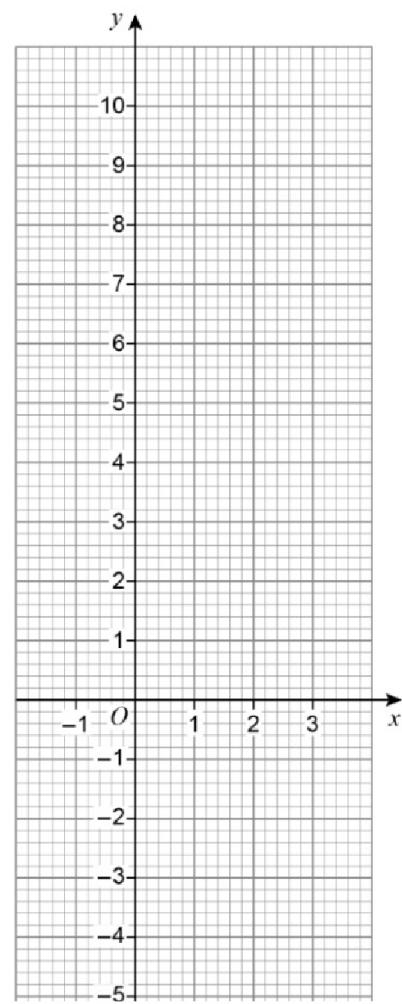
$x =$ 3 ✓

17 Draw the graph of $y = 3x - 1$ for values of x from -1 to 3

[3 marks]

A24

A25



17

Draw the graph of $y = 3x - 1$ for values of x from -1 to 3

[3 marks]

A24

A25

x	-1	0	1	2	3
y	-4	-1	2	5	8

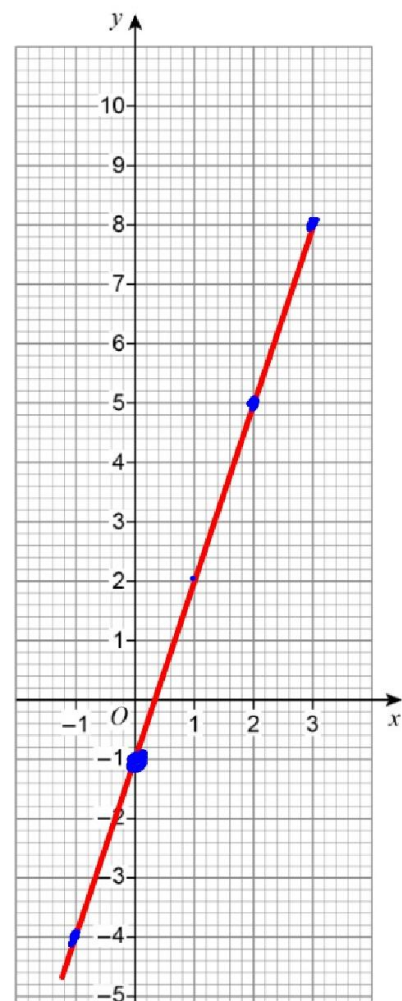
$$y = mx + c$$

y-int

$$\frac{3}{1}$$

$$y = 3x - 1$$

$$\frac{3}{1} \quad \frac{v}{h} = 3$$



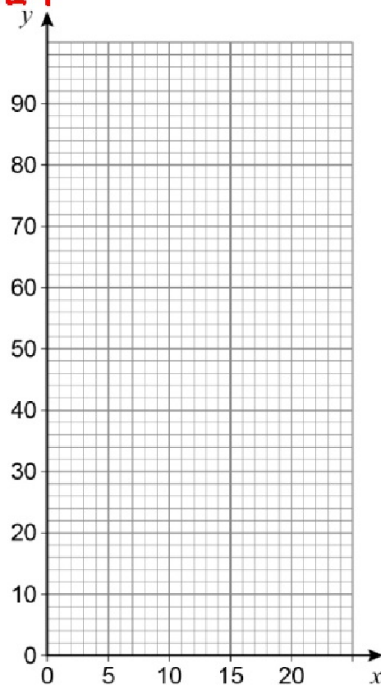
16 Here is a formula.

$$y = 3.6x$$

16 (a) Draw the graph of $y = 3.6x$ for values of x from 0 to 20

[2 marks]

A24



In the formula $y = 3.6x$

y is speed in kilometres per hour (km/h)

x is speed in metres per second (m/s)

16 (b) Convert 50 km/h to m/s

A6

Give your answer to the nearest whole number. [1 mark]

Answer _____ m/s

16

Here is a formula.

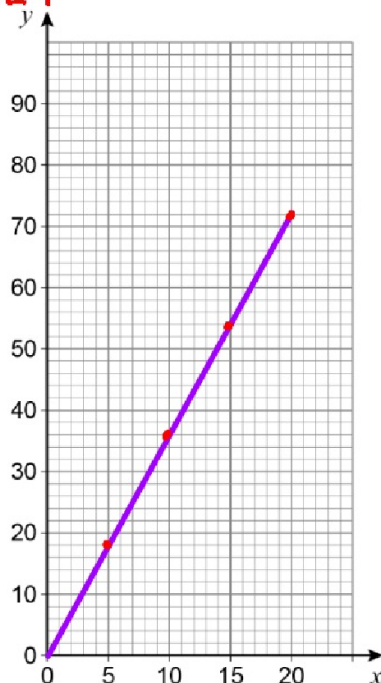
$$y = 3.6x$$

x	5	10	15	20
y	18	36	54	72

16 (a) Draw the graph of $y = 3.6x$ for values of x from 0 to 20

[2 marks]

A24



$$50 = 3.6 \times \boxed{13.8}$$

$$\frac{50}{3.6} = 13.8$$

In the formula $y = 3.6x$ y is speed in kilometres per hour (km/h) x is speed in metres per second (m/s)

$$\approx 14$$

16 (b) Convert 50 km/h to m/s

A6

Give your answer to the nearest whole number. [1 mark]

14

Answer _____ m/s