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Success criteria I am confident about creating a rule for a linear pattern

Fluency

1 **(a)** Copy and complete each of the following tables of values for the rules given for values of x in the range -2 to 2.

(b) Use the table of values to draw a graph of the relationship.

(i) $y = x + 1$

x	-2	-1	0	1	2
y	-1				
(x, y)	(-2, -1)				

(ii) $y = \frac{x}{2}$

x	-2	-1	0	1	2
y	-1				
(x, y)	(-2, -1)				

(iii) $y = 3x - 1$

x	-2	-1	0	1	2
$3x$	-6				
$3x - 1$	-7				
(x, y)	(-2,-7)				

(iv) $y = -x - 4$

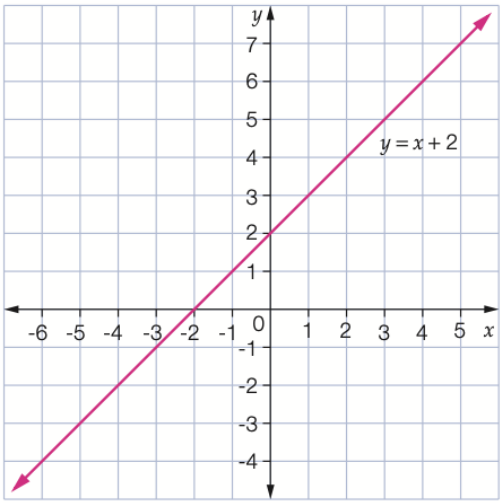
x	-2	-1	0	1	2
$-x$	2				
$-x - 4$	-2				
(x, y)	(-2, -2)				

2 For each of the following graphs, find:

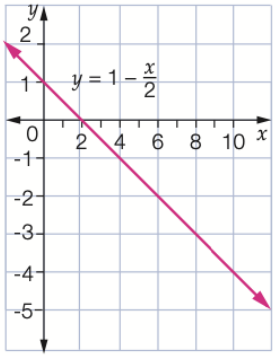
(a) the value of y when $x = 4$

(b) the value of x when $y = -3$.

(i)



(ii)



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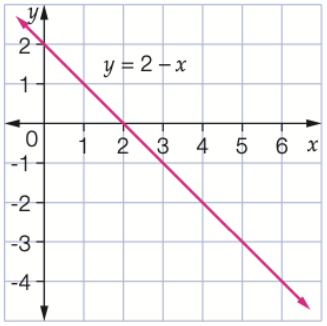
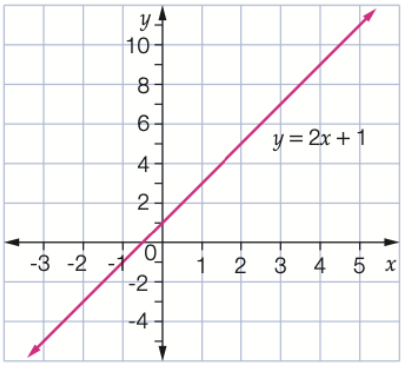
(iii)



(iv)



3 For each of the graphs in Question **2**:

(a) state the x-intercept and write the coordinates of the point

(b) state the y-intercept and write the coordinates of the point

(c) state whether the gradient of the line is positive or negative.

4 The coordinates of a point that lies on the graph of $y = 5x - 4$ are:

A (1, 9) **B** (2, -6) **C** (0, 4) **D** (-1, -9)

5 Which table of values matches coordinates obtained using the equation $y = 2x - 3$?

A

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

B

x	-3	-2	0	2	3
y	3	1	-3	-3	-9

C

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

D

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

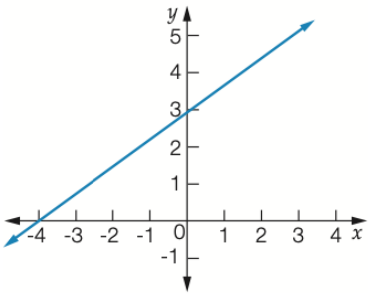
6 The coordinates of the x-intercept and the y-intercept are respectively:

A (3, -4) and (0, 0)

B (0, 3) and (-4, 0)

C (0, -4) and (3, 0)

D (-4, 0) and (0, 3)



Check your answers

WALT Check your understanding

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1 (a) (i)

x	-2	-1	0	1	2
y	-1	0	1	2	3
x, y	(-2, -1)	(-1, 0)	(0, 1)	(1, 2)	(2, 3)

(ii)

x	-2	-1	0	1	2
y	-1	-0.5	0	0.5	1
x, y	(-2, -1)	(-1, -0.5)	(0, 0)	(1, 0.5)	(2, 1)

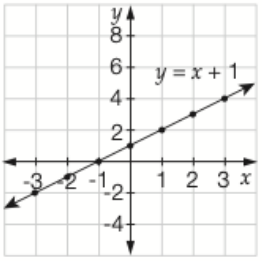
(iii)

x	-2	-1	0	1	2
$3x$	-6	-3	0	3	6
$3x - 1$	-7	-4	-1	2	5
(x, y)	(-2, -7)	(-1, -4)	(0, -1)	(1, 2)	(2, 5)

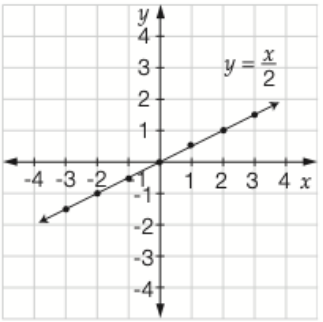
(iv)

x	-2	-1	0	1	2
$-x$	2	1	0	-1	-2
$-x - 4$	-2	-3	-4	-5	-6
(x, y)	(-2, -2)	(-1, -3)	(0, -4)	(1, -5)	(2, -6)

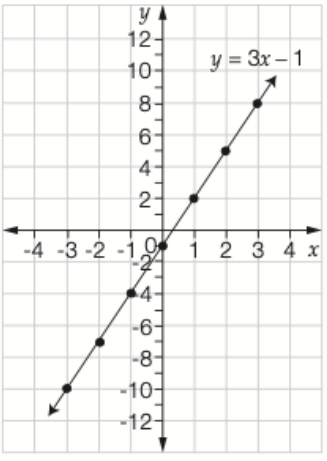
(b) (i)



(ii)



(iii)



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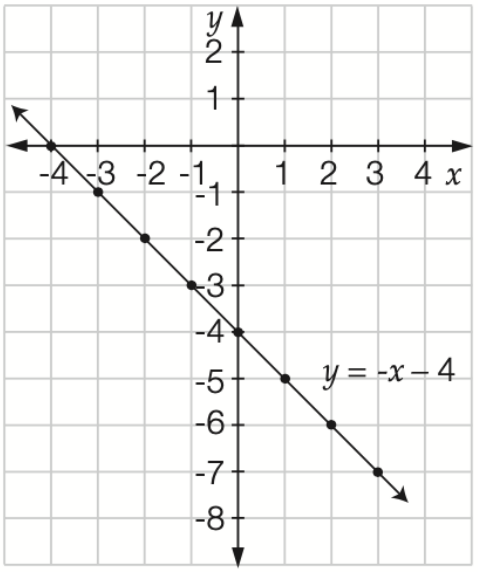
(iv)



2 (a) **(i)** 6 **(ii)** -1 **(iii)** -2 **(iv)** 9

(b) **(i)** -5 **(ii)** 8 **(iii)** 5 **(iv)** -2

3 (a) **(i)** -2, (-2, 0) **(ii)** 2, (2, 0) **(iii)** 2, (2, 0)
(iv) -0.5, (-0.5, 0)

(b) **(i)** 2, (0, 2) **(ii)** 1, (0, 1) **(iii)** 2, (0, 2) **(iv)** 1, (0, 1)

(c) **(i)** positive **(ii)** negative **(iii)** negative **(iv)** positive

4 D **5** A **6** D

7 (a) A **(b)** C **(c)** D