## **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
у	-1				
( <i>x</i> , <i>y</i> )	(-2, -1)				

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

х	-2	-1	0	1	2
у	-1				
( <i>x</i> , <i>y</i> )	(-2, -1)				

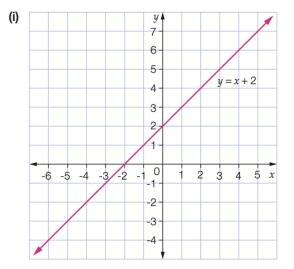
(iii) 
$$y = 3x - 1$$

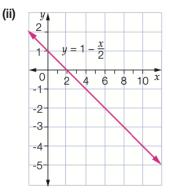
x	-2	-1	0	1	2
3 <i>x</i>	-6				
3x-1	-7				
(x, y)	(-2,-7)				

(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.

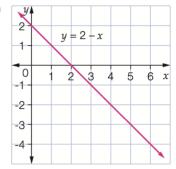




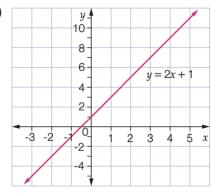
## WALT Check your understanding

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

(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)

2

- **C** (0, 4)
- **D** (-1, -9)
- 5 Which table of values matches coordinates obtained using the equation y = 2x 3?
  - Α

у	-9	-7	-3	1	3

В

х	-3	-2	0	2	3
у	3	1	-3	-3	-9

 x
 -3
 -2
 0
 2
 3

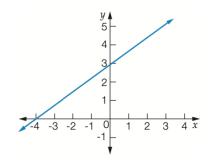
 y
 -6
 -5
 -3
 -1
 0

-3 | -2 |

D

x	-3	-2	0	2	3
у	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)

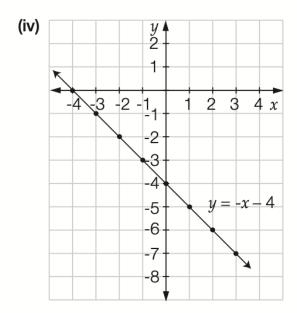


Check your answers

# WALT Check your understanding

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

1 (a) (i) 0 2 -2 -1 1 -1 0 1 2 3 y x, y (-2, -1) (-1, 0) (0, 1) (1, 2) (2, 3)(ii) 0 2 -2 -1 1  $\boldsymbol{x}$ -0.5 0 0.5 1 -1 у *x*, *y* (-2, -1) (-1, -0.5) (0, 0) (1, 0.5) (2, 1) (iii) -2 0 2 -1 x3x-6 -3 0 3 6 3x - 1-7 -1 2 5 -4 (-1, -4) (0, -1) (1, 2) (x, y) (-2, -7) (2, 5) (iv) х -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) *y* ≰ 8 − Did you get it right? 6 4 2 2 3 x (ii) 3 2 2 3 -2 -3-(iii) 12 y = 3x10-8-6 4 2--4 -3 -2 з -6-8-10-



- 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