

Linear Equations and Tables of Values (B)

ANSWERS



Equations of straight lines in the form of $y = mx + c$ will generate an arithmetic sequence.

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

$$y = mx + c$$

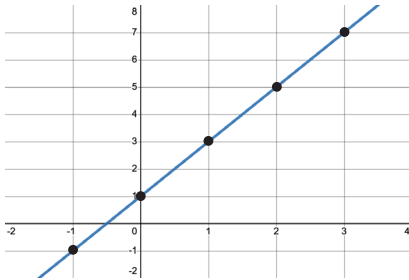
↖ ↗
+ m

Section A

Fill in the x and y values for the points on the straight lines and write the equations.

Example

1)

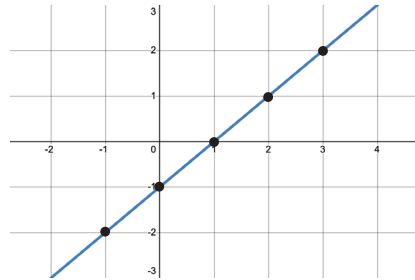


x	-1	0	1	2	3
y	-1	1	3	5	7

↖ ↗
+ 2

$$y = 2x + 1$$

2)

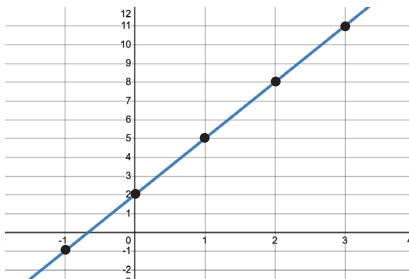


x	-1	0	1	2	3
y	-2	-1	0	1	2

↖ ↗
+ 1

$$y = 1x - 1$$

3)

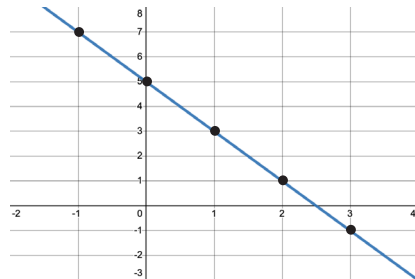


x	-1	0	1	2	3
y	-1	2	5	8	11

↖ ↗
+ 3

$$y = 3x + 2$$

4)



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

↖ ↗
- 2

$$y = -2x + 5$$

Section B

Fill in the gaps in the tables and find the equation of the straight lines.

1)

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

↖ ↗ ↗ ↗ ↗
+ 2

$$y = 2x + 3$$

2)

x	-1	0	1	2	3
y	3	4	5	6	7

↖ ↗ ↗ ↗ ↗
+ 1

$$y = x + 4$$

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3)

x	-1	0	1	2	3	4
y	-2	1	4	7	10	13

$$y = \underline{\hspace{2cm} 3x + 1 \hspace{2cm}}$$

4)

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

$$y = \underline{\hspace{2cm} -2x + 5 \hspace{2cm}}$$

5)

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

$$y = \underline{\hspace{2cm} 2x - 9 \hspace{2cm}}$$

6)

x	-1	0	1	2	3
y	2	2.5	3	3.5	4

$$y = \underline{\hspace{2cm} 0.5x + 2.5 \hspace{2cm}}$$

7)

x	-2	-1	0	1	2	3
y	-4	-2.5	-1	0.5	2	3.5

$$y = \underline{\hspace{2cm} 1.5x - 1 \hspace{2cm}}$$

8)

x	-3	-2	-1	0	1	2	3
y	-5	-1	3	7	11	15	19

$$y = \underline{\hspace{2cm} 4x + 7 \hspace{2cm}}$$

Section C

Write the coordinates in the table, fill in the gaps and find the equation

- 1) (-2, -5) and (2, 3)

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

$$y = \underline{\hspace{2cm} 2x - 1 \hspace{2cm}}$$

- 2) (-2, 5) and (3, 10)

x	-3	-2	-1	0	1	2	3
y	4	5	6	7	8	9	10

$$y = \underline{\hspace{2cm} x + 7 \hspace{2cm}}$$

- 3) (-1, 12) and (4, 7)

x	-1	0	1	2	3	4	5
y	12	11	10	9	8	7	6

$$y = \underline{\hspace{2cm} -x + 11 \hspace{2cm}}$$

- 4) (-4, -16) and (-1, -7)

x	-4	-3	-2	-1	0	1	2
y	-16	-13	-10	-7	-4	-1	2

$$y = \underline{\hspace{2cm} 3x - 4 \hspace{2cm}}$$

- 5) (-3, 6) and (1, 8)

x	-3	-2	-1	0	1	2	3
y	6	6.5	7	7.5	8	8.5	9

$$y = \underline{\hspace{2cm} 0.5x + 7.5 \hspace{2cm}}$$

- 6) (3, 7) and (6, -5)

x	0	1	2	3	4	5	6
y	19	15	11	7	3	-1	-5

$$y = \underline{\hspace{2cm} -4x + 19 \hspace{2cm}}$$

- 7) (-2, 8) and (4, 5)

x	-3	-2	-1	0	1	2	3	4
y	8.5	8	7.5	7	6.5	6	5.5	5

$$y = \underline{\hspace{2cm} -0.5x + 7 \hspace{2cm}}$$

- 8) (-2, -9) and (6, 3)

x	-2	-1	0	1	2	3	4	5	6
y	-9	-7.5	-6	-4.5	-3	-1.5	0	1.5	3

$$y = \underline{\hspace{2cm} 1.5x - 6 \hspace{2cm}}$$