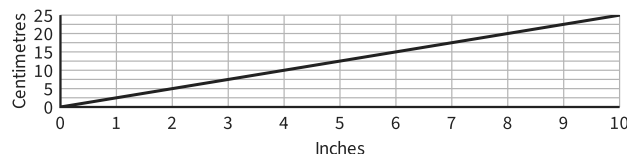


### 1 Conversion graphs

The graph converts between inches and centimetres.

a) Change 4 inches into centimetres.

b) Change 15 cm into inches.



a) up from 4: 10 cm

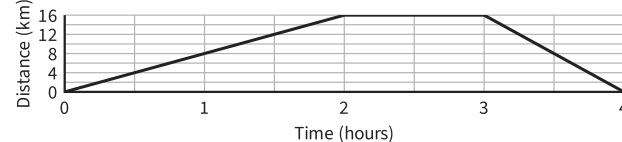
b) across from 15: 6 inches

### 2 Distance time graphs

Sam cycles from home to a farm shop and back.

a) How long did Sam stop at the shop?

b) Was Sam faster going there or coming back? Why?



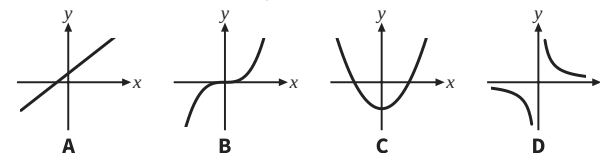
a) 1 hour

b) coming back: the line is steeper

### 3 Recognising graphs

a) Which graph could be  $y = x^2$ ?

b) Which graph could be  $y = 2x + 1$ ?



a) C: the U shaped curve

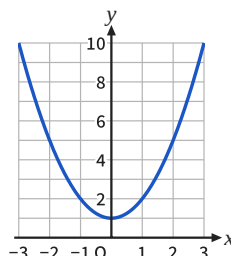
b) A: the straight line

### 4 Plotting quadratic graphs

a) Complete the table for  $y = x^2 + 1$ .

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

b) Plot the points. Join them with a smooth curve.



a) 10, 5, 2, 1, 2, 5, 10

b) a smooth U curve, lowest at (0, 1)

## Graphs 2 revision mat answers

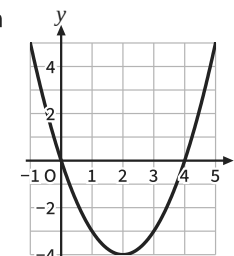
Foundation B

### 5 Roots and turning points

The graph of  $y = x^2 - 4x$  is drawn on the grid.

a) Write down the two values of  $x$  where the curve crosses the  $x$  axis.

b) Write down the coordinates of the lowest point.



a)  $x = 0$  and  $x = 4$

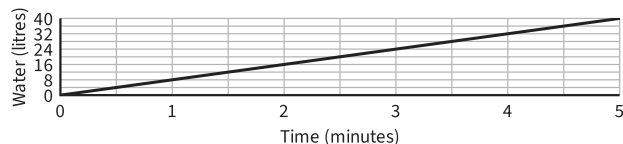
b) (2, -4)

### 6 Rates from graphs

The graph shows water filling an empty tank.

a) How many litres go into the tank each minute?

b) At this rate, how much water is there after 10 minutes?



a)  $40 \div 5 = 8$  litres

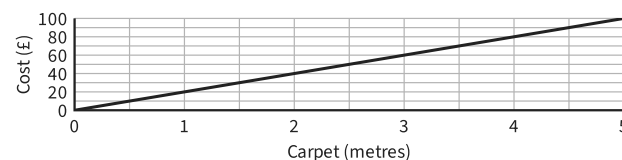
b)  $8 \times 10 = 80$  litres

### 7 Direct proportion graphs

The graph shows the cost of carpet.

a) Find the cost of 3 metres of carpet.

b) How does the graph show direct proportion?



a) £60

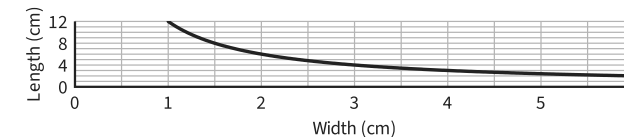
b) a straight line through (0, 0)

### 8 Inverse proportion graphs

The graph shows the length and width of rectangles.

a) Find the length when the width is 2 cm.

b) Work out width  $\times$  length for widths 3 cm and 4 cm. What do you notice?



a) 6 cm b)  $3 \times 4 = 12$ ,  $4 \times 3 = 12$

it is always 12