

Name \_\_\_\_\_ Date \_\_\_\_\_

# Unit 11 Graphs

- 1 A hat costs  $\$h$  and a coat costs  $\$c$ .

The coat costs \$20 more than the hat.

Write a function to show this. \_\_\_\_\_

\_\_\_\_\_

- 2 A man is  $m$  years old. A woman is  $w$  years old.

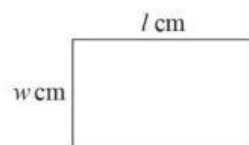
$$w = 4m$$

Describe in words the connection between the ages of the woman and the man.

\_\_\_\_\_

\_\_\_\_\_

3



The length of a rectangle is  $l \text{ cm}$  and the width is  $w \text{ cm}$ .

$$w = l - 6$$

- a Find the width of the rectangle when the length is 15 cm. \_\_\_\_\_

\_\_\_\_\_

- b Find the length of the rectangle when the width is 30 cm. \_\_\_\_\_

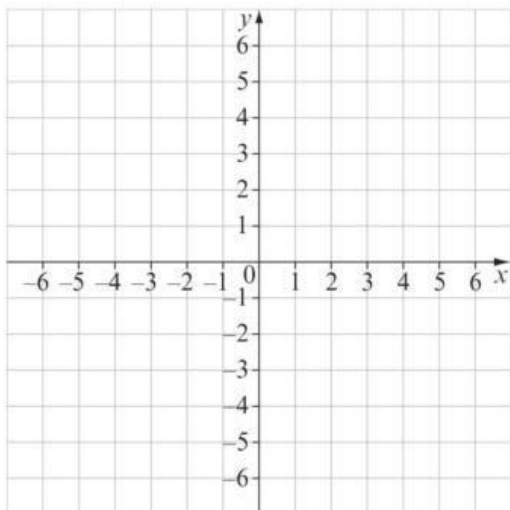
\_\_\_\_\_

4 For the function  $y = x + 2$ :

a Complete this table.

$x$	-4	-2	0	2	4
$x + 2$			2		

b



Use these axes to draw a graph of  $y = x + 2$ .

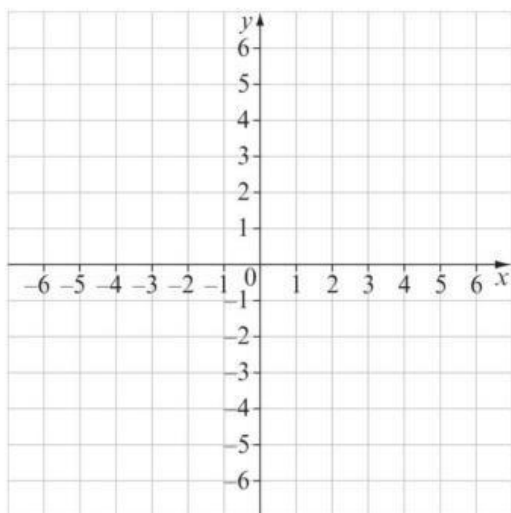
c On the same axes, draw the graph of  $y = x - 1$ .

5 For the function  $y = 0.5x$ :

a Complete this table.

$x$	-6	-4	-2	0	2	4	6
$0.5x$		-2				2	

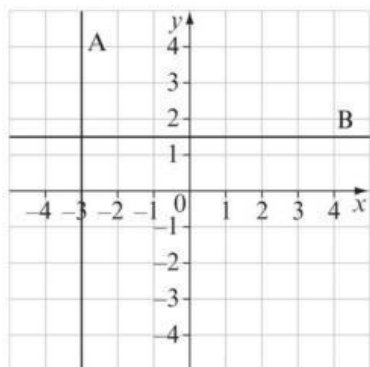
**b**



Use these axes to draw a graph of  $y = 0.5x$ .

**c** On the same axes, draw the graph of  $y = 3x$ .

**6**



Write the names of lines A and B on this grid. \_\_\_\_\_

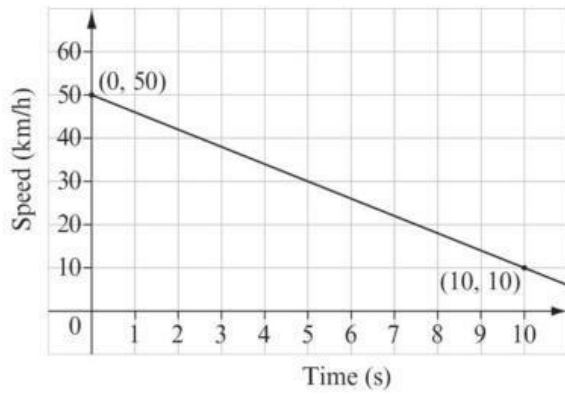
\_\_\_\_\_

\_\_\_\_\_

**7** A straight line passes through  $(-4, -8)$  and  $(8, -8)$ .

Write the name of the line. \_\_\_\_\_

8



This graph shows the speed of a car as it slows down.

- Find the speed of the car after 4 seconds. \_\_\_\_\_
- How much does the speed of the car decrease every second?  
\_\_\_\_\_
- If the car continues to slow down at the same rate, how long will it take for the car to stop?  
\_\_\_\_\_

9



This is a circular vase. The top of the vase is narrower than the bottom.

The vase is filled with water at a constant rate.

Use the axes below to sketch a graph to show how the depth of the water changes with time.

