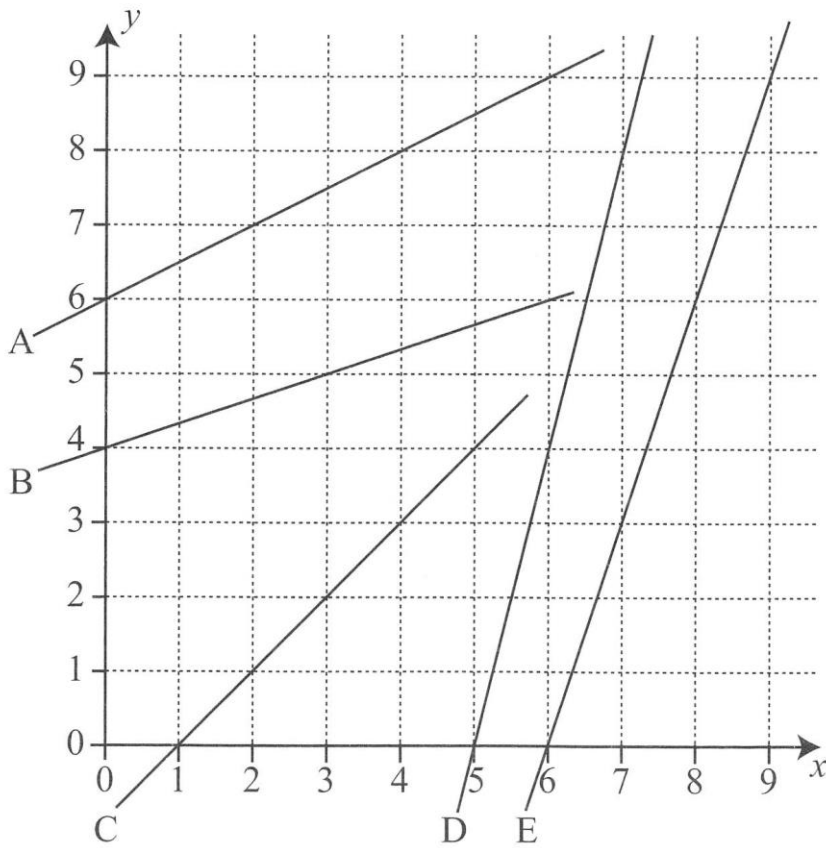
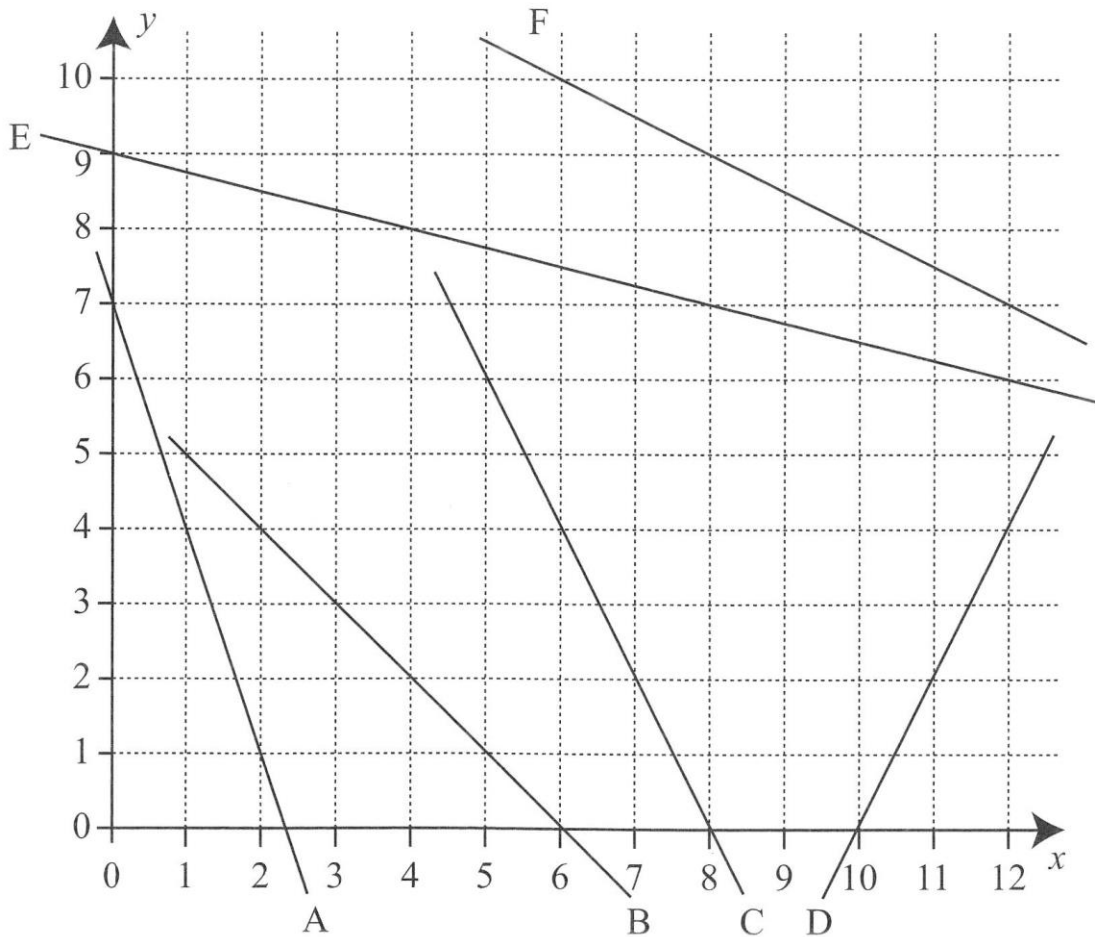


1) Find the gradient of each line below:



2) Find the gradient of each line below:



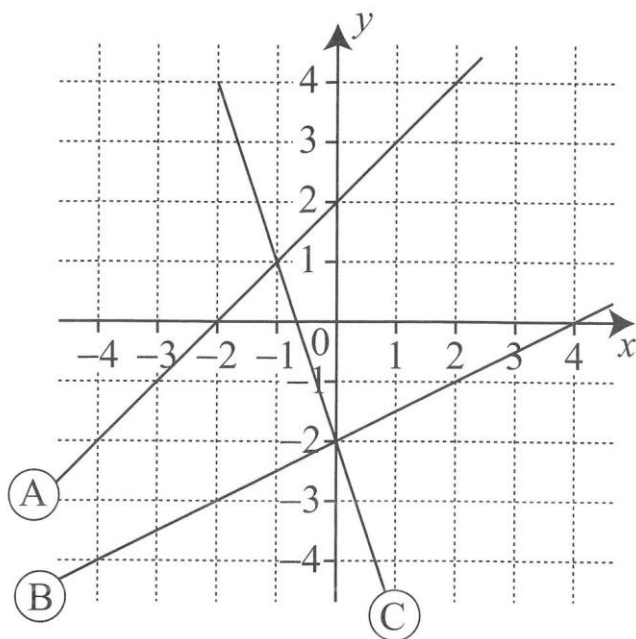
- 3 Find the gradient of the line joining each pair of points below:
- a** (2, 4) and (3, 7)      **b** (1, 0) and (4, 5)      **c** (1, 4) and (3, 2)
- d** (1, 5) and (5, 2)      **e** (-3, -2) and (1, -10)      **f** (4, -1) and (6, -4)

- 4) Write down **i** the gradient and **ii** the  $y$ -intercept of each line below:

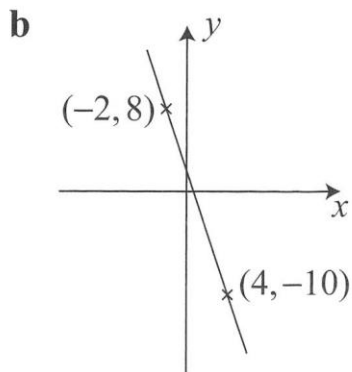
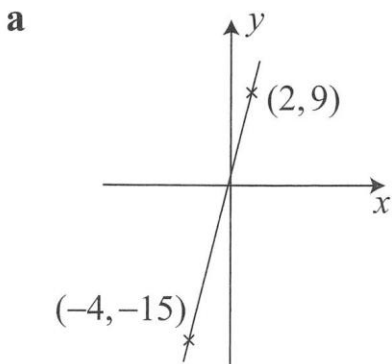
**a**  $y = 8x + 4$       **b**  $y = 2x - 6$       **c**  $y = x$       **d**  $y = x - 5$

**e**  $y = 4 - 2x$       **f**  $y = \frac{1}{4}x + 3$       **g**  $y + 3x = 2$       **h**  $7x - y = 6$

- 5) Write down the equation of each of the 3 lines shown.



- 6) Find the equation of the straight line which passes through (0, 5) and has a gradient of 6.
- 7) Find the equation of the straight line which passes through (1, 5) and has a gradient of 2.
- 8) Write down the equation of each line shown below:



- 9) Find the equation of the straight line which passes through (-6, 12) and (2, 8).

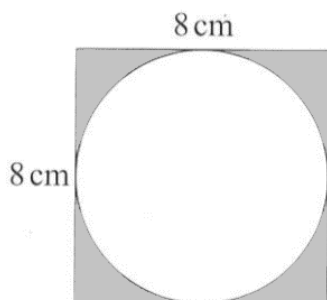
10) For  $-3 \leq x \leq 3$  draw the following graphs:

a)  $y = 3x - 5$

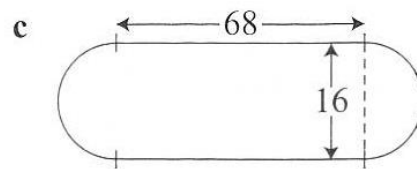
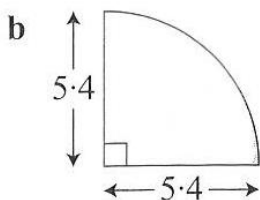
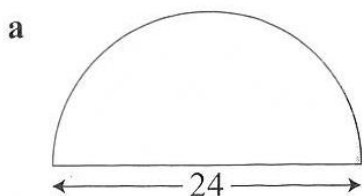
b)  $y = 2x + 3$

c)  $y = 7 - x$

11) Find the shaded area



12) Find the area and perimeter of each shape

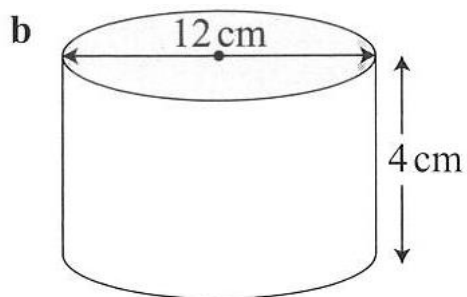
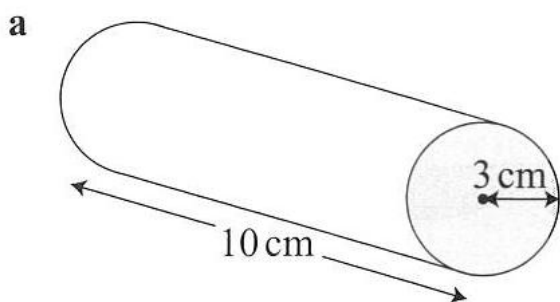


13) Calculate the diameter of a circle with area of  $50\text{cm}^2$

14) Calculate the area of a circle with circumference of 20cm

15) A wheel of radius 25cm spins 200 times, how far does it move forwards?

16) Find the volume and surface area of the following cylinders:



## Answers

1. A,  $\frac{1}{2}$ ; B,  $\frac{1}{3}$ ; C, 1; D, 4; E, 3.

2. A, -3; B, -1; C, -2; D, 2; E,  $-\frac{1}{4}$ ; F,  $-\frac{1}{2}$

3. a 3    b  $\frac{5}{3}$     c -1    d  $-\frac{3}{4}$     e -2    f  $-\frac{3}{2}$

4    a i 8    ii 4    b i 2    ii -6    c i 1    ii 0

      d i 1    ii -5    e i -2    ii 4    f i  $\frac{1}{4}$     ii 3

      g i -3    ii 2    h i 7    ii -6    i i 2    ii 3

5    A,  $y = x + 2$ ; B,  $y = \frac{1}{2}x - 2$ ; C,  $y = -3x - 2$

6     $y = 6x + 5$     7     $y = 2x + 3$

8    a  $y = 4x + 1$     b  $y = -3x + 2$     9     $y = -\frac{1}{2}x + 9$

10) y values in the tables:

a) -14, -11, -8, -5, -2, 1, 4    b) -3, -1, 1, 3, 5, 7, 9    c) 10, 9, 8, 7, 6, 5, 4

11)  $13.7\text{cm}^2$     12a) area= $226\text{cm}^2$     perim= $61.7\text{cm}$     b) area= $22.9\text{cm}^2$     perim= $19.3\text{cm}$

c) area= $1290\text{cm}^2$     perim= $186\text{cm}$

13)  $7.98\text{cm}$     14)  $31.8\text{cm}^2$     15)  $314\text{m}$     16a) vol= $283\text{cm}^3$     sa= $245\text{cm}^2$

b) vol= $452\text{cm}^3$     sa= $377\text{cm}^2$