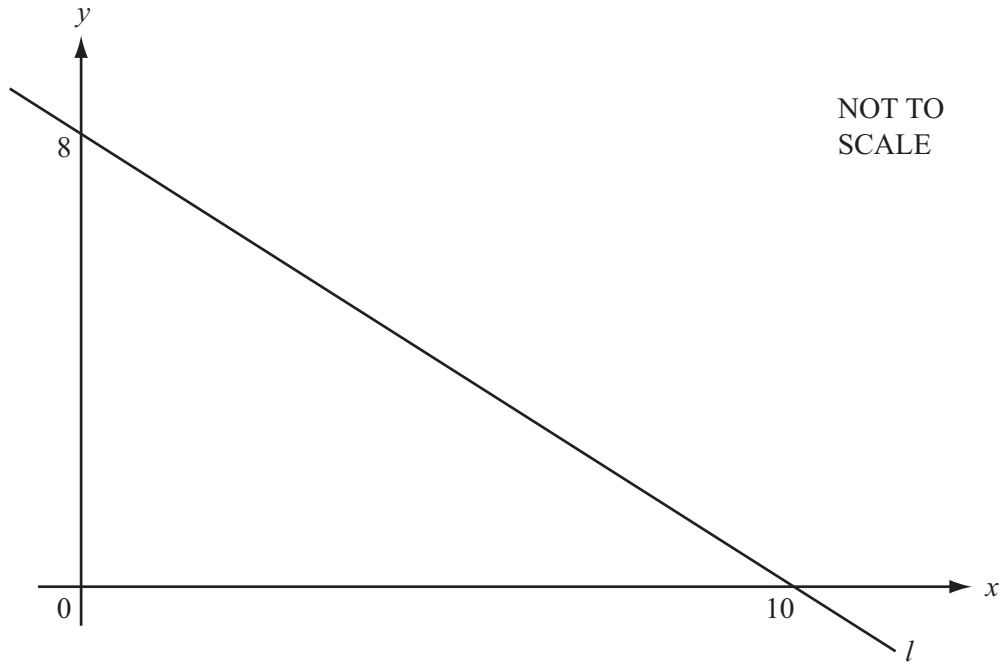# Straight line graphs 1

1)

The line *l* passes through the points (10, 0) and (0, 8) as shown in the diagram.

(a) Find the gradient of the line as a fraction in its simplest form.

Answer(a) [1]

(b) **Write down** the equation of the line parallel to *l* which passes through the origin.

Answer(b) [1]

(c) Find the equation of the line parallel to *l* which passes through the point (3, 1).
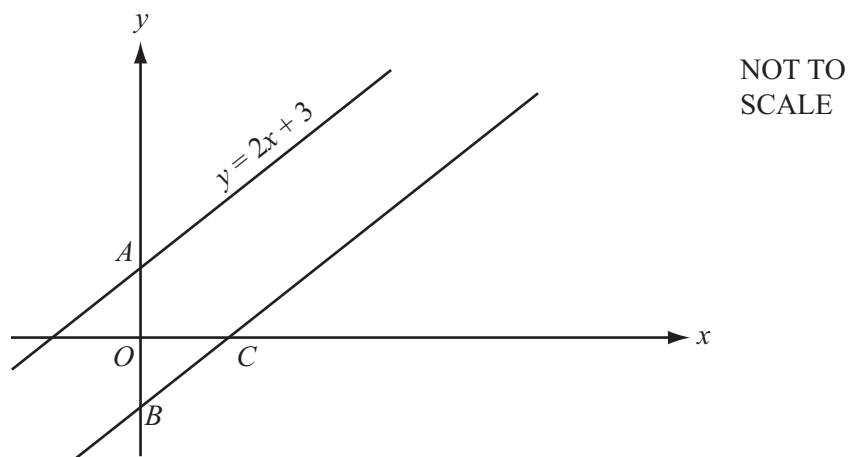
Answer(c) y = [2]

2)   A straight line passes through two points with co-ordinates (6, 8) and (0, 5).
      Work out the equation of the line.

Answer .... [3]

3)

The distance *AB* is 7 units.

(a) Write down the equation of the line through *B* which is parallel to $y = 2x + 3$.

Answer(a) .... [2]

(b) Find the co-ordinates of the point *C* where this line crosses the *x* axis.

Answer(b)   (............ , ...) [1]

Straight line graphs 1

4)   Find the co-ordinates of the mid-point of the line joining the points $A(2, -5)$ and $B(6, 9)$.

Answer (,   )   [2]
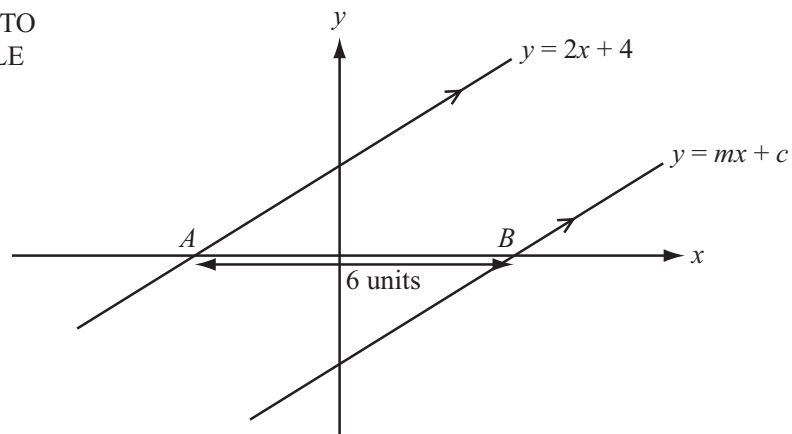
5)   Find the length of the line joining the points $A(-4, 8)$ and $B(-1, 4)$.

Answer AB =   [2]

6)   NOT TO
     SCALE

The line $y = mx + c$ is parallel to the line $y = 2x + 4$.
The distance AB is 6 units.

Find the value of m and the value of c.

Answer m =   and $c =$ [4]

7)   The points $(2, 5)$, $(3, 3)$ and $(k, 1)$ all lie in a straight line.

(a) Find the value of k.

Answer(a) k =   [1]
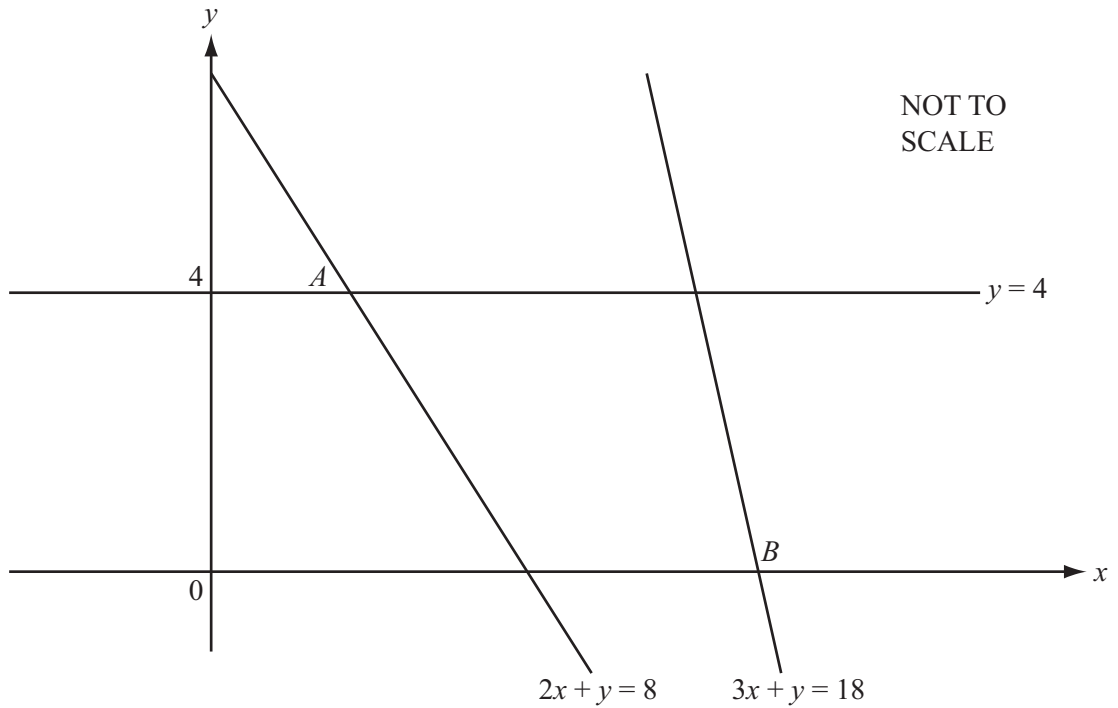
(b) Find the equation of the line.

Answer(b)   [3]

8)   Find the length of the straight line from $Q (-8, 1)$ to $R (4 , 6)$.

Answer QR =   [3]

9)

(a) The line $y = 4$ meets the line $2x + y = 8$ at the point A.
Find the co-ordinates of A.

Answer(a) A   (,   )   [1]

(b) The line $3x + y = 18$ meets the x axis at the point B.
Find the co-ordinates of B.

Answer(b) B   (,   )   [1]

(c) (i) Find the co-ordinates of the mid-point M of the line joining A to B.

Answer(c)(i) *M*   (,   )   [1]
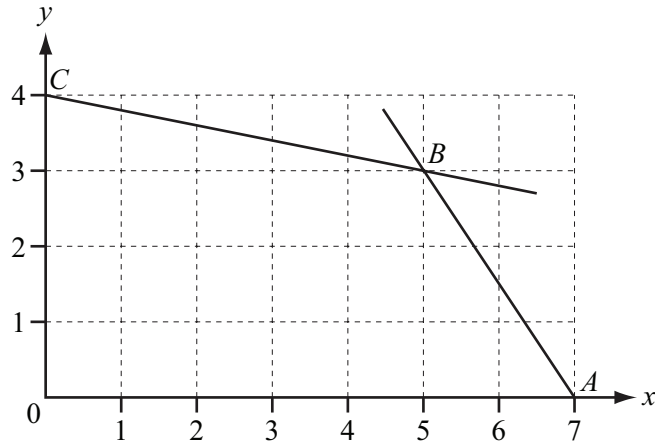
(ii) Find the equation of the line through M parallel to $3x + y = 18$.

Answer(c)(ii)   [2]

Straight line graphs 1
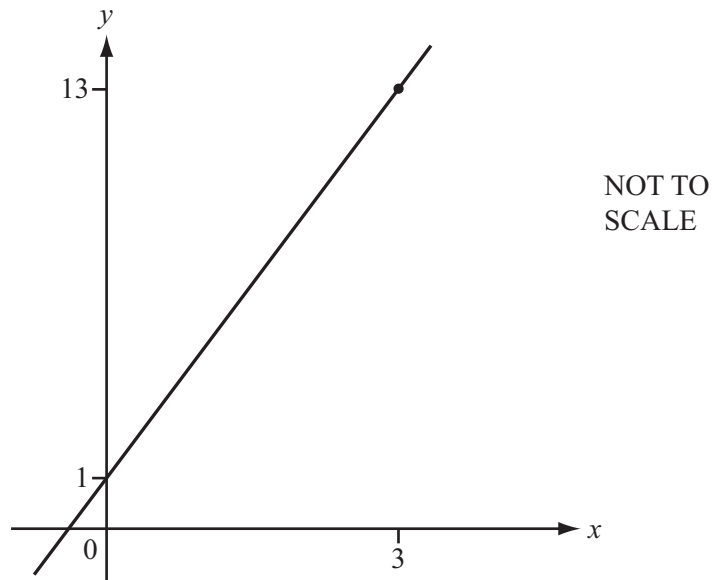
10)

The lines *AB* and *CB* intersect at *B*.

(a) Find the co-ordinates of the midpoint of *AB*.

Answer(a) (,   ) [1]

(b) Find the equation of the line *CB*.

Answer(b) [3]

11)

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The diagram shows the straight line which passes through the points (0, 1) and (3, 13).

Find the equation of the straight line.

Answer [3]