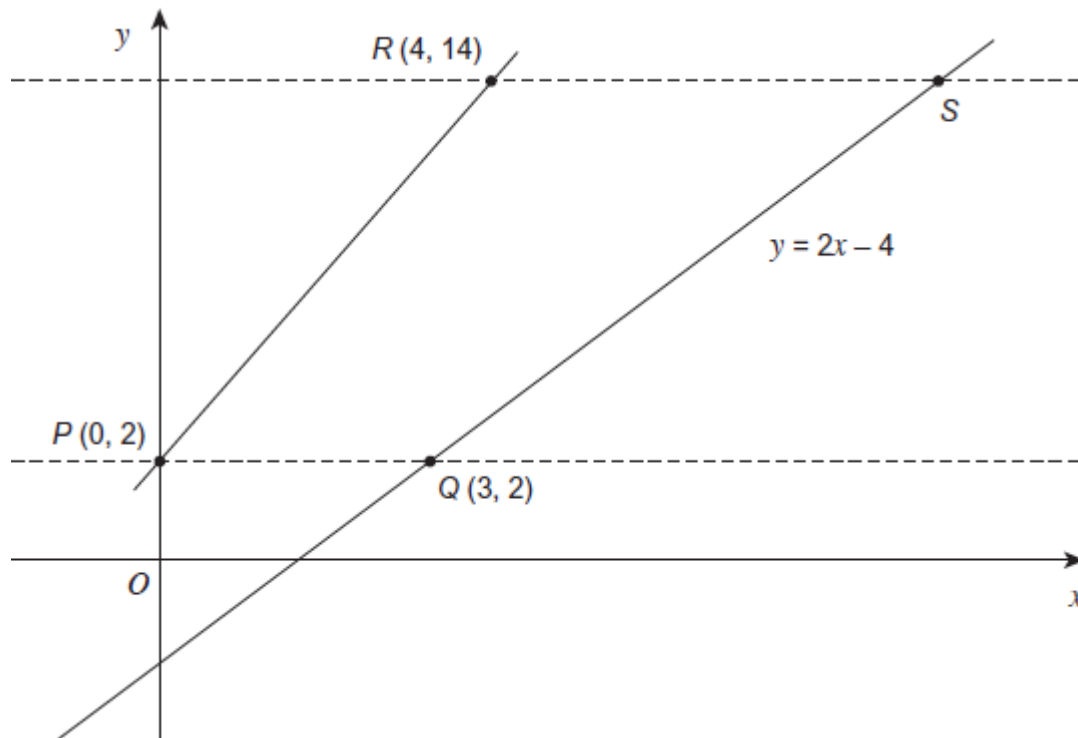


Q1.

The two dashed lines are both parallel to the  $x$  axis.

Not drawn accurately



(a) Circle the equation of line  $PR$ .

$y = 2x + 2$

$y = 3x + 2$

$y = 4x + 2$

$y = 3.5x + 2$

(1)

(b) The equation of line  $QS$  is  $y = 2x - 4$

Work out the ratio of lengths  $PQ : RS$

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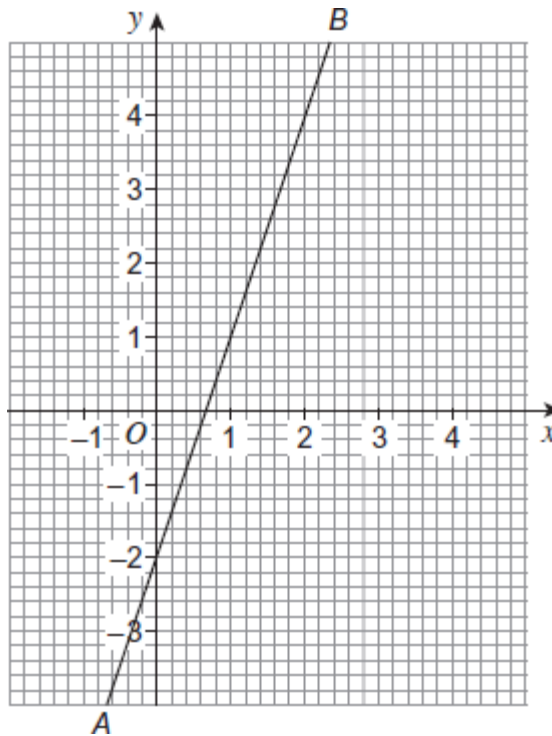
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Answer ..... : .....

(3)  
(Total 4 marks)

Q2.



Work out the equation of line  $AB$ .

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Answer .....

**(Total 3 marks)**

Q3.

A straight line has gradient  $-2$  and passes through the point  $(-3, 10)$ .

Work out the equation of the line.

Give your answer in the form  $y = mx + c$

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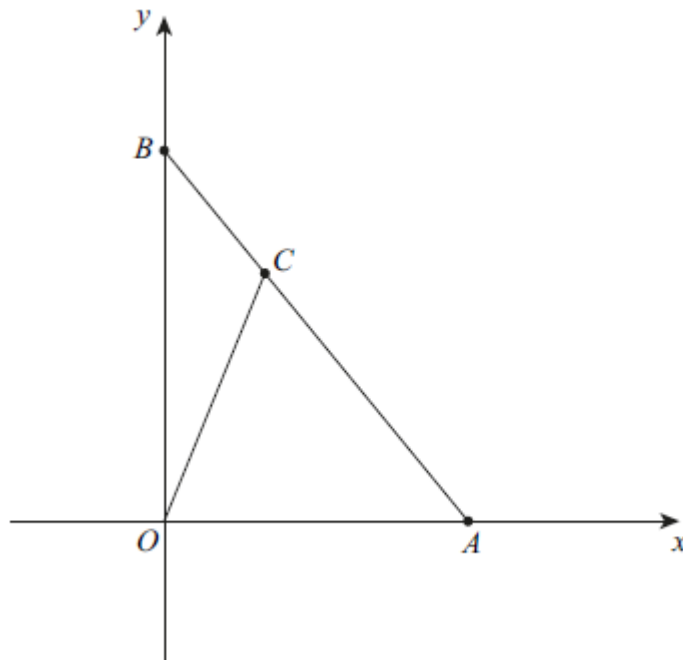
Answer .....

(Total 2 marks)

**Q4.**

The equation of line  $AB$  is  $y = 12 - 2x$

The area of triangle  $OCA$  is 24 square units.



Work out the coordinates of  $C$ .

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Answer (..... , .....

**(Total 5 marks)**

**Q5.**

The line  $y = mx + c$  passes through the point (4, 3).

It is parallel to the line  $y = 5x + 6$

Work out the values of  $m$  and  $c$ .

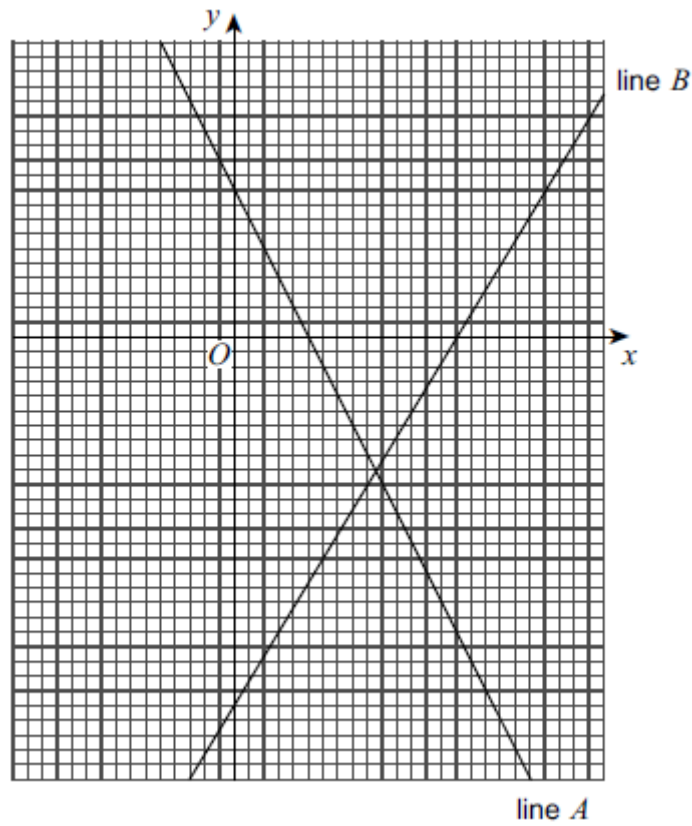
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$m = \dots\dots\dots, c = \dots\dots\dots$

**(Total 3 marks)**

**Q6.**

The graph shows two straight lines.



The equation of line *A* is  $y = 2 - x$

Work out the equation of line *B*.

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Answer.....

(Total 4 marks)

Q7.(a) A sequence starts

4    8    12    16    ...

The  $n$ th term is  $4n$

Circle the  $n$ th term of this sequence

6    10    14    18    ...

$4n$

$6n$

$4n + 2$

$6n + 2$

(1)

(b) These points are in a straight line.

Point 1    (4, 6)

Point 2    (8, 10)

Point 3    (12, 14)

Point 4    (16, 18)

Write down the coordinates of Point  $n$  in this sequence.

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Point  $n$     ( ..... , ..... )

(1)

(c) Work out the equation of the straight line that passes through these points.

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Answer .....

(2)

(Total 4 marks)

**Q8.** Billy asked 20 people,

“What is your favourite crisp flavour?”

(a) Complete the tally chart to show Billy’s results.

Favourite crisp flavour	Tally	Frequency
Plain		12
Cheese and Onion		
Barbecue		3
	<b>Total</b>	20

(2)

(b) Billy uses his tally chart to draw a pictogram.

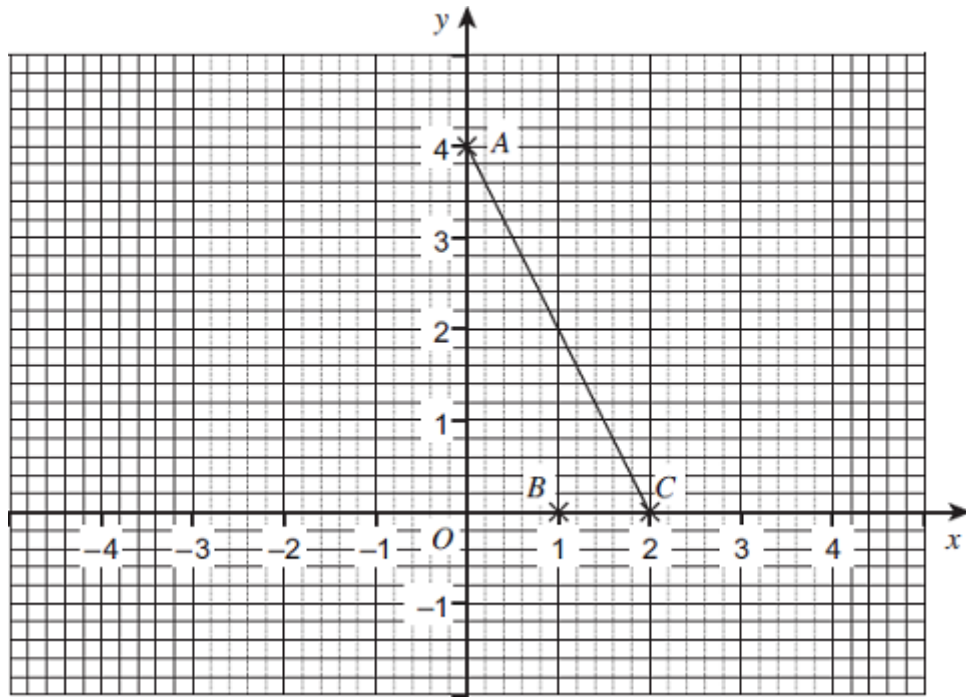
Complete the pictogram and the key.

Key:      represents ..... people

Plain	
Cheese and Onion	
Barbecue	○ ◐

(3)  
(Total 5 marks)

**Q9.** Show clearly that the equation of the line through  $B$  parallel to  $AC$  is  $2x + y = 2$



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(Total 3 marks)

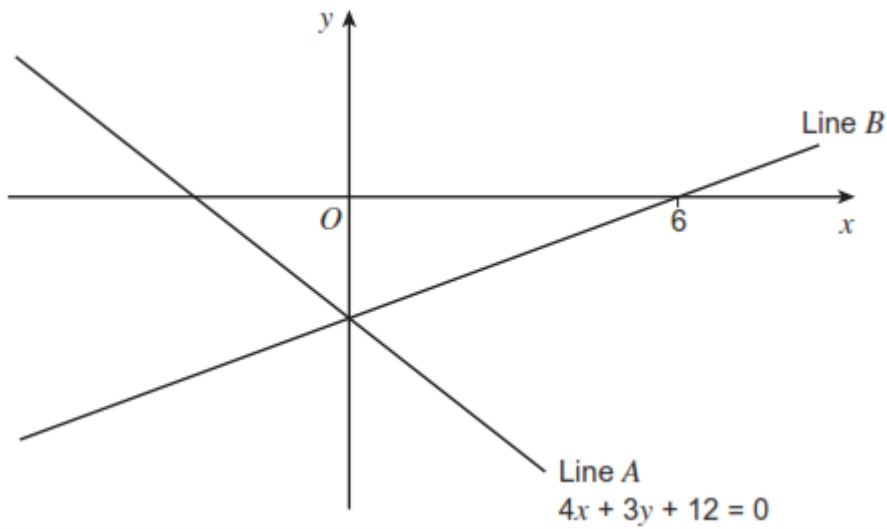
**Q10.** Lines  $A$  and  $B$ , intersect on the  $y$ -axis.

Line  $B$  intersects the  $x$ -axis at the point  $(6, 0)$ .

The equation of line  $A$  is  $4x + 3y + 12 = 0$

Not drawn accurately





Work out the equation of line *B*.

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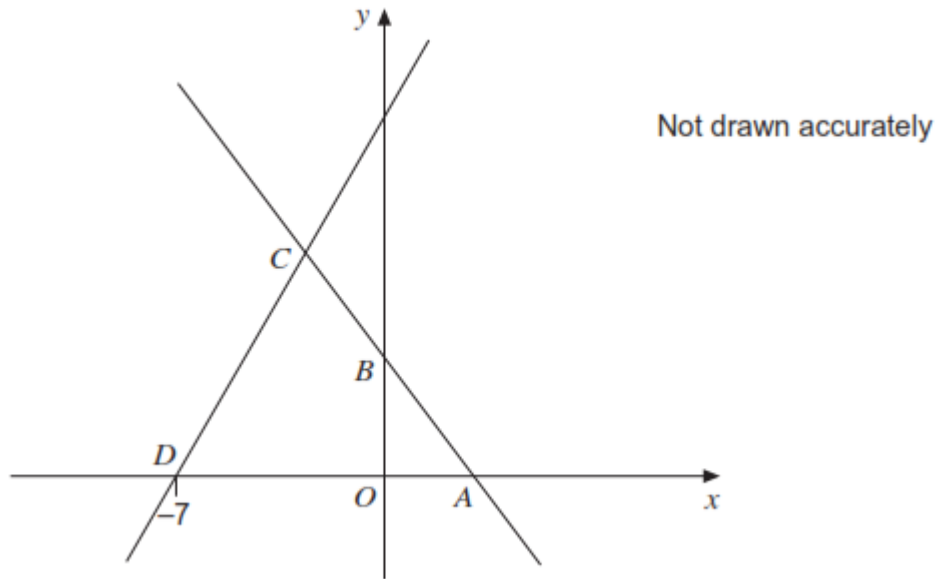
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Answer .....

**(Total 4 marks)**

**Q11.** In the diagram, points *A*, *B* and *C* lie on the line  $2x + y = 6$   
*B* is the midpoint of *AC*.  
*D* is the point  $(-7, 0)$ .



Work out the equation of the line through  $C$  and  $D$ .

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Answer .....

**(Total 5 marks)**

**Q12.** Circle the **two** equations that are equivalent to  $2y = 3x + 4$

A  $2x = 3y + 4$

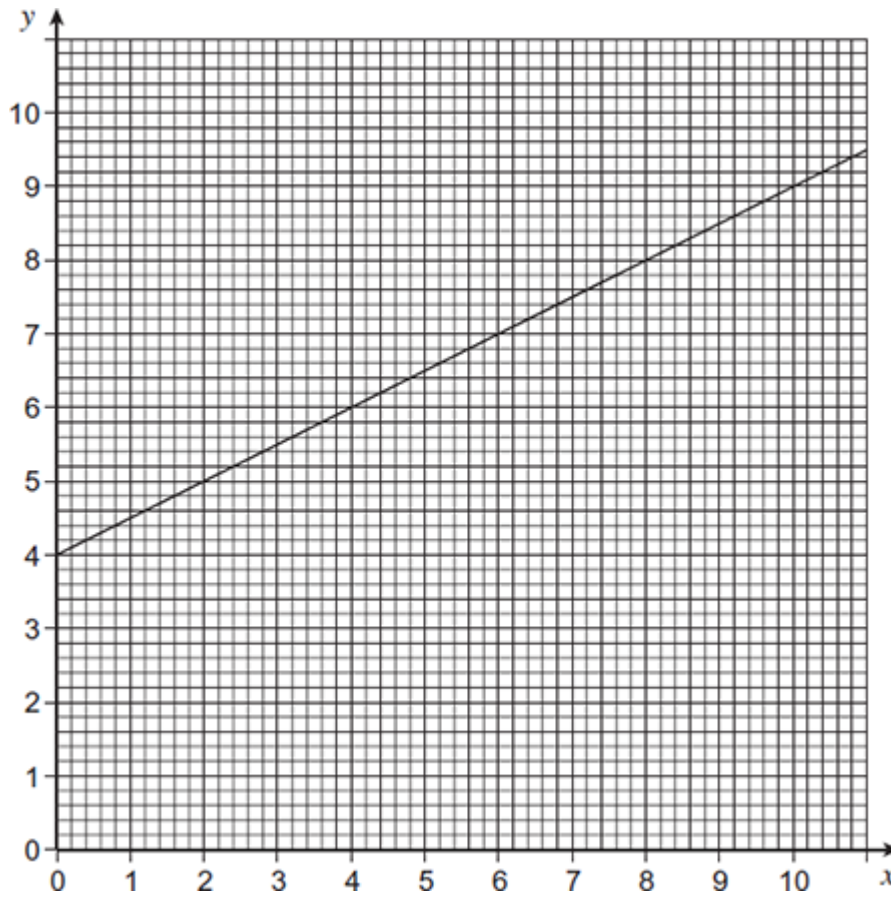
B  $y - \frac{3}{2}x = 2$

C  $y = \frac{3}{2}x + 4$

D  $3x - 2y + 4 = 0$

(Total 2 marks)

Q13. Work out the equation of the line shown.



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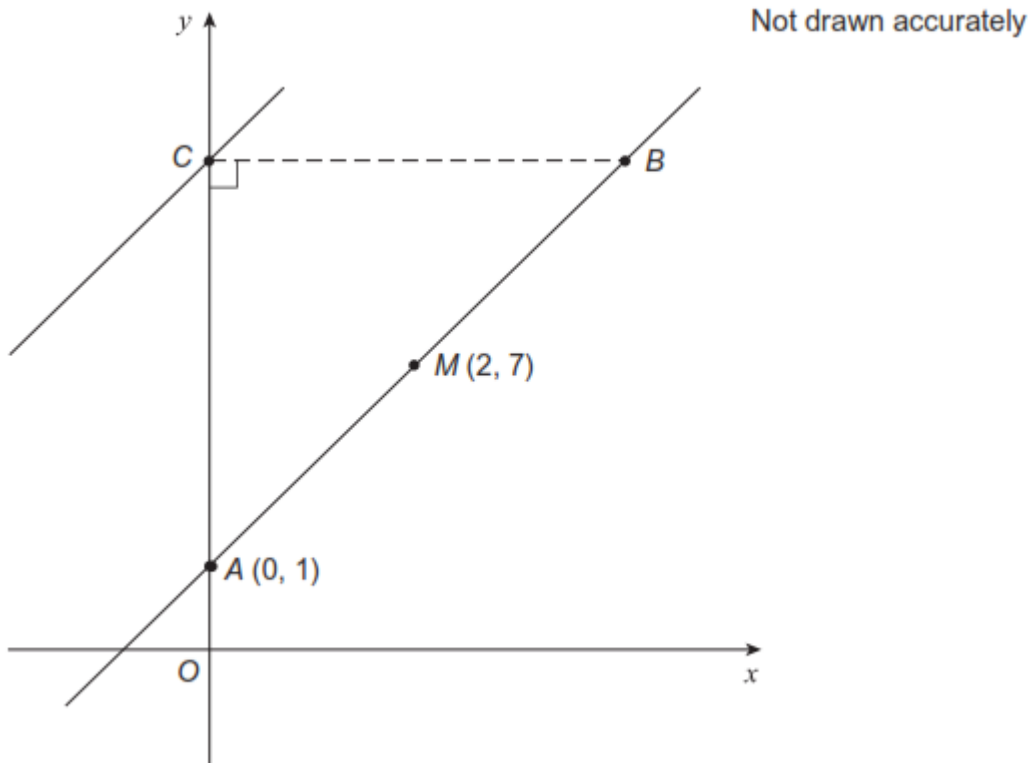
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Answer .....

(Total 3 marks)

**Q14.** On the grid,  $A$  is the point  $(0, 1)$ .  
 The midpoint,  $M$ , of  $AB$  is  $(2, 7)$ .  
 The gradient of  $AB$  is 3.



Work out the equation of the line through  $C$  that is parallel to  $AB$ .

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Answer .....

**(Total 3 marks)**