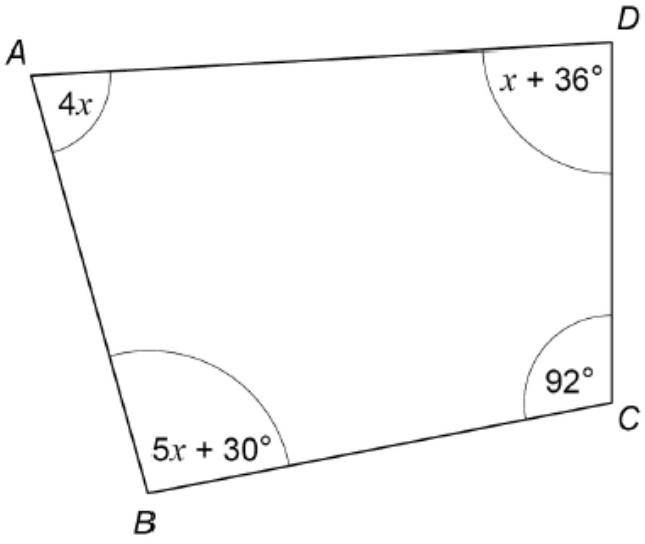
AQA – Geometry and measures – GCSE Mathematics Paper-1

1. May/2020/Paper_1H/No.23

ABCD is a quadrilateral.

Not drawn accurately



Prove that *ABCD* is **not** a cyclic quadrilateral.

[4 marks]

2. May/2020/Paper_1H/No.24

y is an obtuse angle.

Which statement is true?

Tick **one** box.

[1 mark]

☐ $\sin y > 0$ and $\cos y > 0$

☐ $\sin y > 0$ and $\cos y < 0$

☐ $\sin y < 0$ and $\cos y > 0$

☐ $\sin y < 0$ and $\cos y < 0$

3. June/2019/Paper_1F/No.1

Which type of angle is the largest?

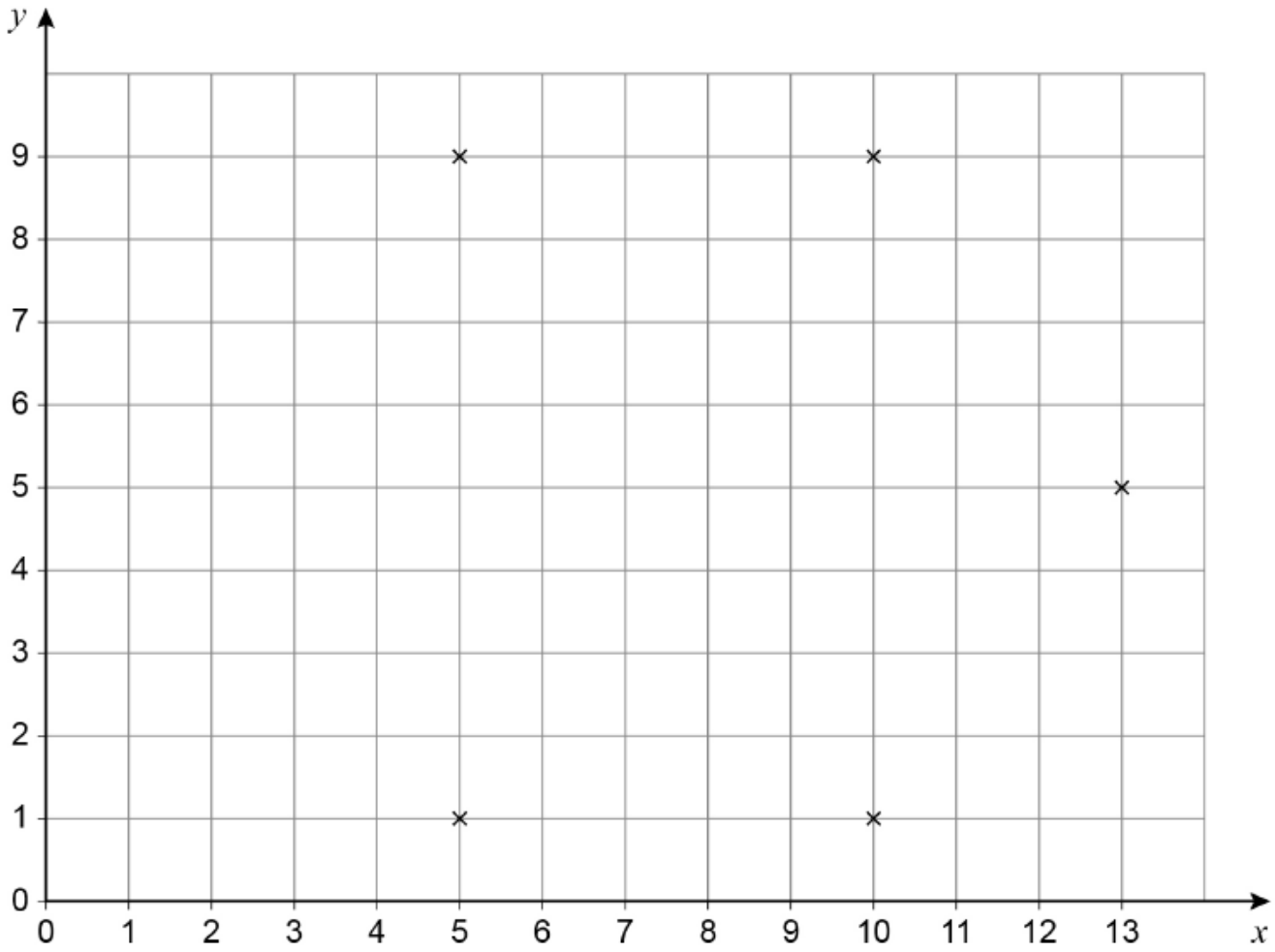
Circle your answer.

[1 mark]

right reflex obtuse acute

4. June/2019/Paper_1F/No.6

Five points are plotted on a centimetre grid.



The points are five of the vertices of a hexagon.

Each side of the hexagon has the same length.

Work out **one** possible pair of coordinates of the other vertex.

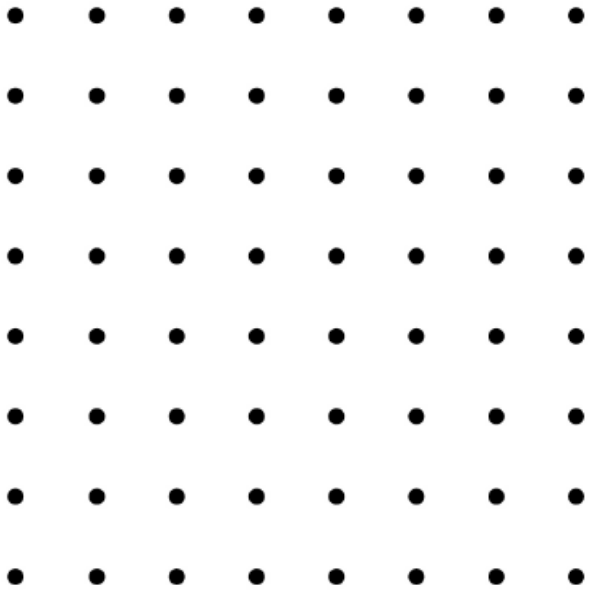
[2 marks]

Answer (_____ , _____)

5. June/2019/Paper_1F/No.11

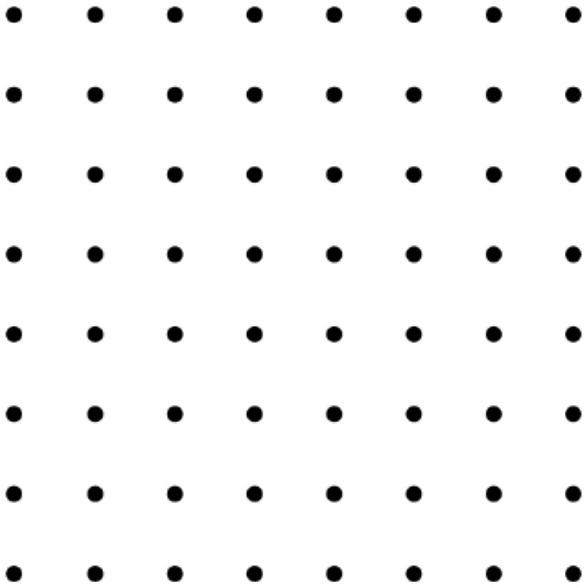
(a) On the grid below, show how you can make a parallelogram with **two** of these triangles.

[1 mark]



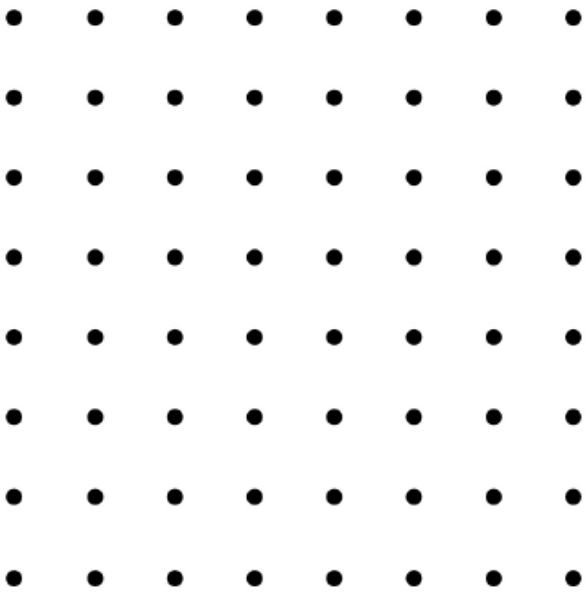
(b) On the grid below, show how you can make a trapezium with **three** of these triangles.

[1 mark]



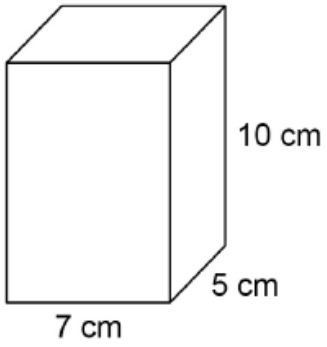
(c) On the grid below, show how you can make a rhombus with **four** of these triangles.

[1 mark]



6. June/2019/Paper_1F/No.14

Here is a cuboid.



Work out the volume.

[2 marks]

Answer _____ cm^3

7. June/2019/Paper_1F/No.15

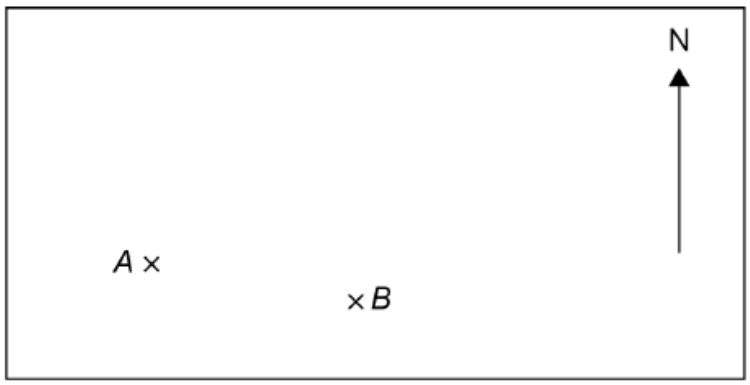
Circle the shape that has a uniform cross section.

[1 mark]

cone sphere cylinder pyramid

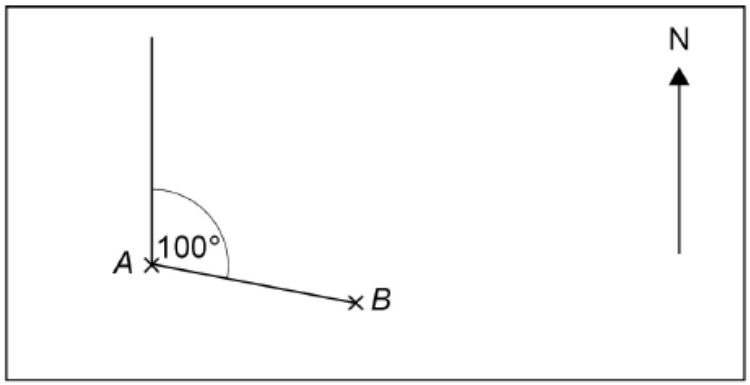
8. June/2019/Paper_1F/No.16

(a) Here is a map showing points *A* and *B*.



Kemal wants to measure the bearing of ***A* from *B***.

He draws two lines and measures the angle between them.



Kemal says that the bearing of *A* from *B* is 100°

Is his method correct?

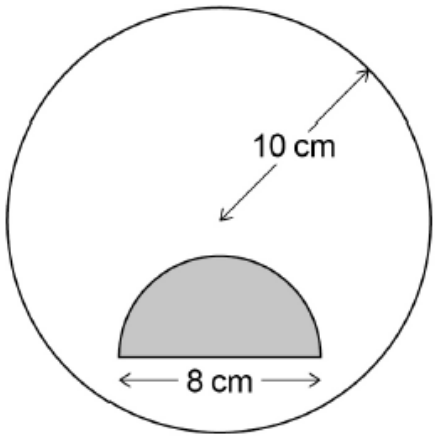
Give a reason for your answer.

[1 mark]

9. June/2019/Paper_1F/No.25

A shaded semicircle is inside a circle as shown.

Not drawn accurately



The **radius** of the circle is 10 cm

The **diameter** of the semicircle is 8 cm

How many times bigger is the unshaded area than the shaded area?

[4 marks]

Answer _____

10. June/2019/Paper_1H/No.3

Work out the arc length, in metres, of a semicircle of radius 6 metres.

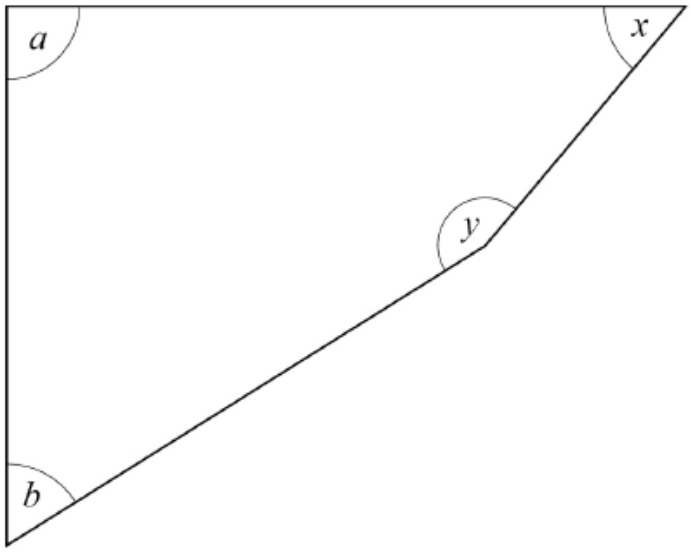
Circle your answer.

[1 mark]

3π 6π 12π 18π

11. June/2019/Paper_1H/No.14

Here is a quadrilateral.



Not drawn accurately

$a = 90°$ and $a : b = 5 : 3$

$x : y = 1 : 3$

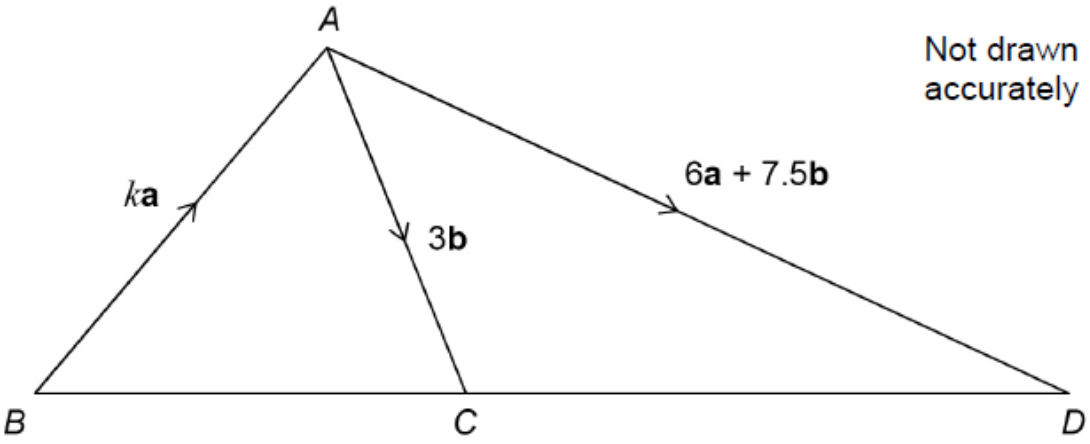
Show that $b = x$

[3 marks]

12. June/2019/Paper_1H/No.22

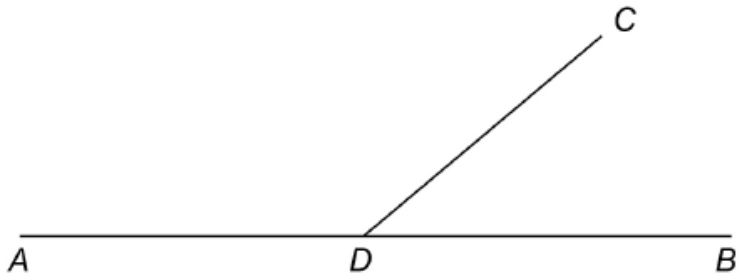
ABC and *ACD* are triangles.

k is a constant.



13. Nov/2019/Paper_1F/No.15

ADB and *CD* are straight lines.



Not drawn accurately

angle *ADC* = 5 × angle *CDB*

Work out the size of angle *ADC*.

[3 marks]

Answer _____ degrees

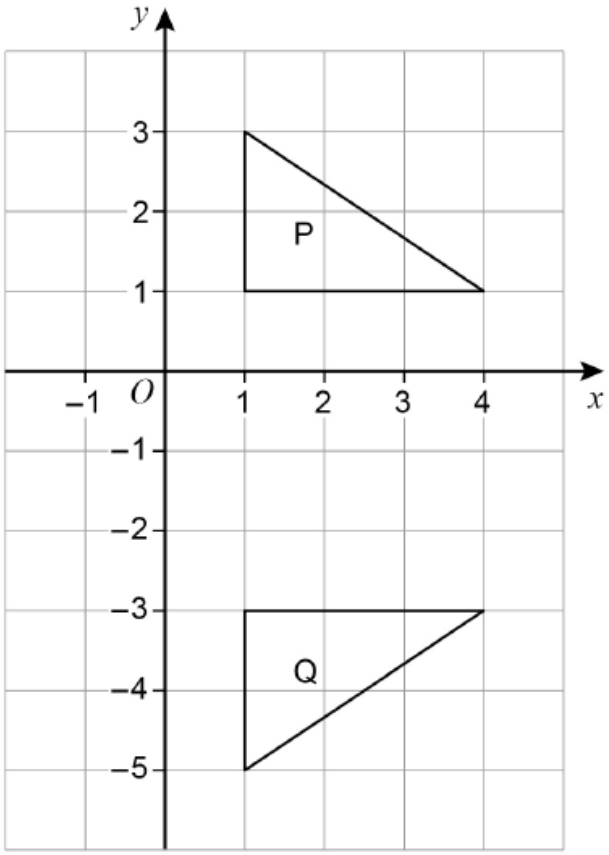
Circle the value of 5^3

[1 mark]

8 15 25 125

14. Nov/2019/Paper_1F/No.24

(a) Here are two triangles, P and Q.



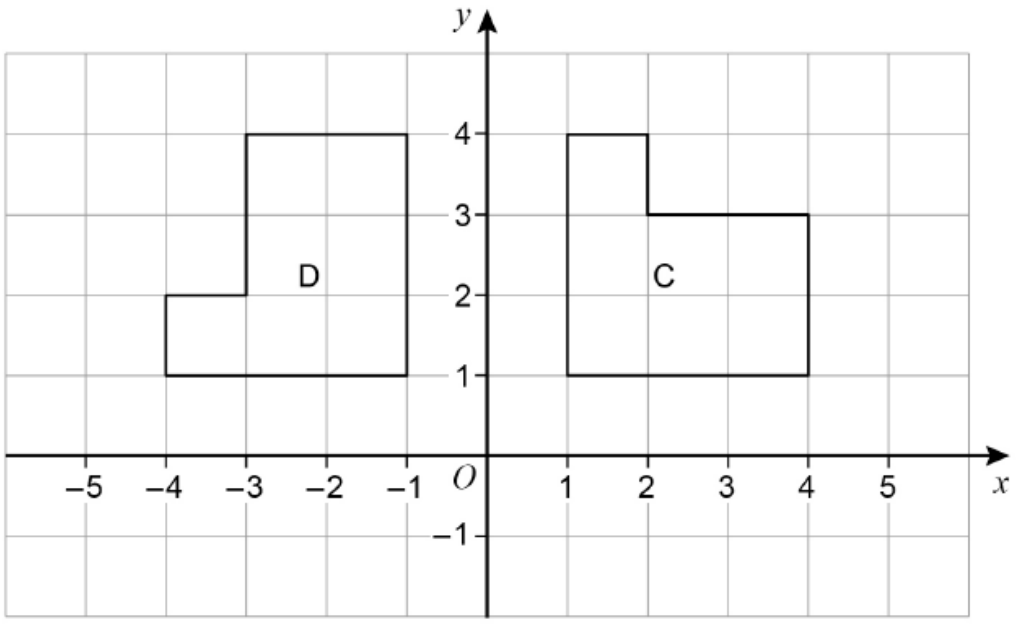
Here is a statement.

A transformation that maps P to Q is a reflection in the line $x = -1$

Make **one** criticism of the statement.

[1 mark]

(b) Here are two shapes, C and D.



Here is a statement.

> A transformation that maps C to D is a rotation through 90° anticlockwise.

Make **one** criticism of the statement.

[1 mark]

15. Nov/2019/Paper_1H/No.3

A is (2, 13) and *B* is (10, 1)

Circle the midpoint of *AB*.

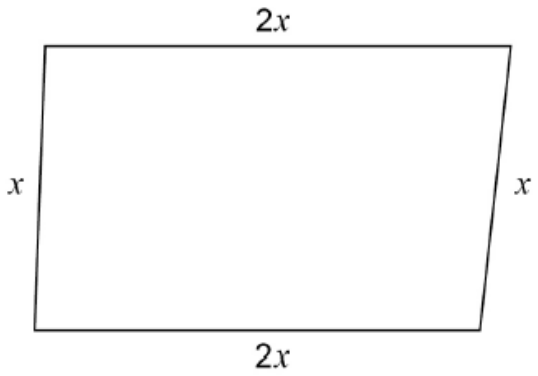
[1 mark]

(4, 6) (5, 6.5) (6, 7) (8, 12)

16. Nov/2019/Paper_1H/No.15

Here is a **sketch** of a quadrilateral.

All lengths are in centimetres.



Not drawn accurately

Tick **one** box for each statement.

[3 marks]

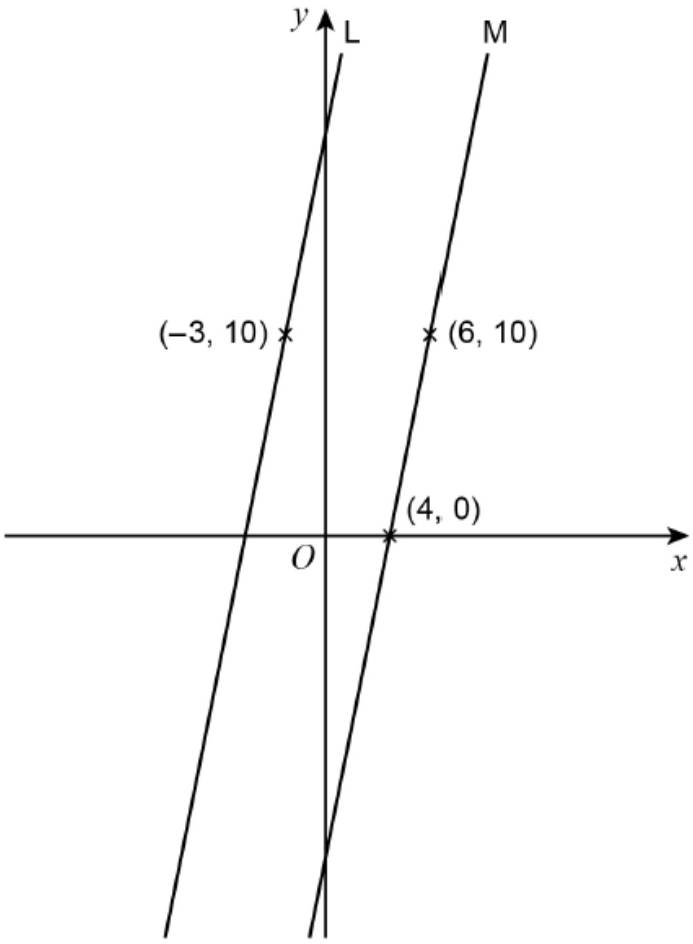
	True	May be true	Not true
The quadrilateral is a rectangle			
The quadrilateral is a parallelogram			
The quadrilateral is a rhombus			
The quadrilateral is a kite			

17. Nov/2019/Paper_1H/No.22

(–3, 10) is a point on line L.

(4, 0) and (6, 10) are points on line M.

L and M are parallel.



Not drawn accurately

Work out the equation of line L.

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

[3 marks]

Answer _____