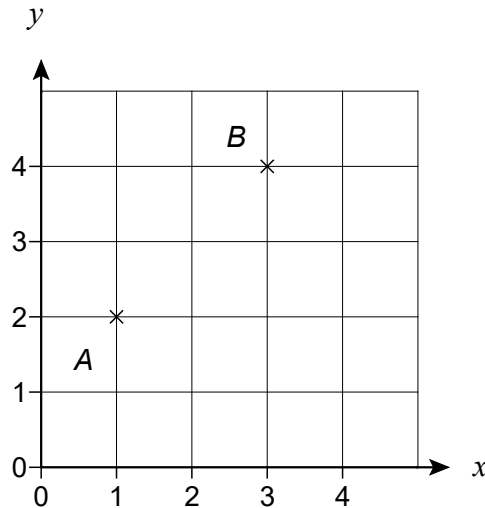


Topic Test 1 (20 minutes)

Geometry and Measure recap and review - Higher

Use this grid to answer questions 1 to 3



- 1 ABC is an isosceles triangle.
Circle the coordinates of C .

[1 mark]

(1, 4) (3, 0) (4, 2) (0, 4)

- 2 Point B is translated by the vector $\begin{pmatrix} -2 \\ -1 \end{pmatrix}$ to the point D .

What are the coordinates of D ?

Circle your answer.

[1 mark]

(1, 4) (1, 3) (4, 1) (3, 1)

- 3 Point A is reflected through the line $y = x$ to the point E .

What are the coordinates of E ?

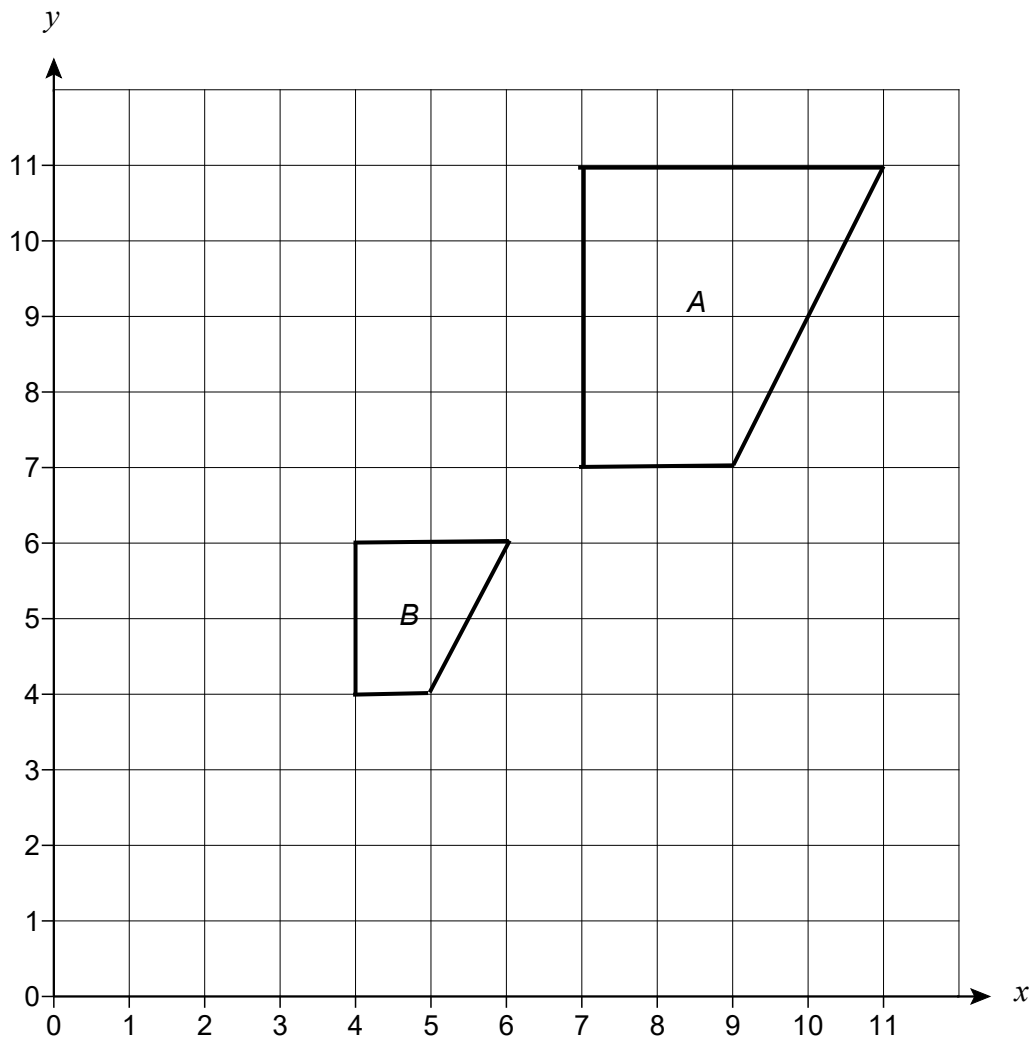
Circle your answer.

[1 mark]

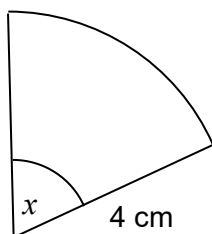
(1, 1) (3, 2) (2, 3) (2, 1)

4 Describe the single transformation that maps shape *A* onto shape *B*.

[3 marks]



5 The diagram shows a sector of a circle of radius 4 cm



Not drawn accurately

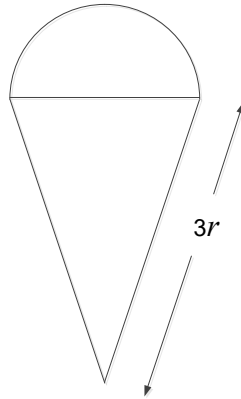
The perimeter of the sector is 12 cm

Work out the size of angle x .

[3 marks]

Answer _____ degrees

6 A hemisphere of radius r is joined to a cone of the same radius.



The slant height of the cone is $3r$.

Show that the combined volume is $\frac{2}{3}\pi r^3(\sqrt{2} + 1)$

[5 marks]

- 7 A large spring has a diameter of 15 cm
It is made from 20 loops of steel cable.



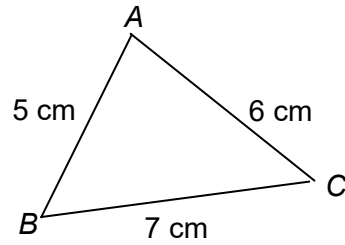
Steel cable costs £3.60 per metre.

How many springs can be made for £1000?

[4 marks]

Answer £ _____

8



Not drawn accurately

Is angle A acute or obtuse?

You **must** show your working.

[2 marks]

Answer _____