M7 =32 days to go!

6

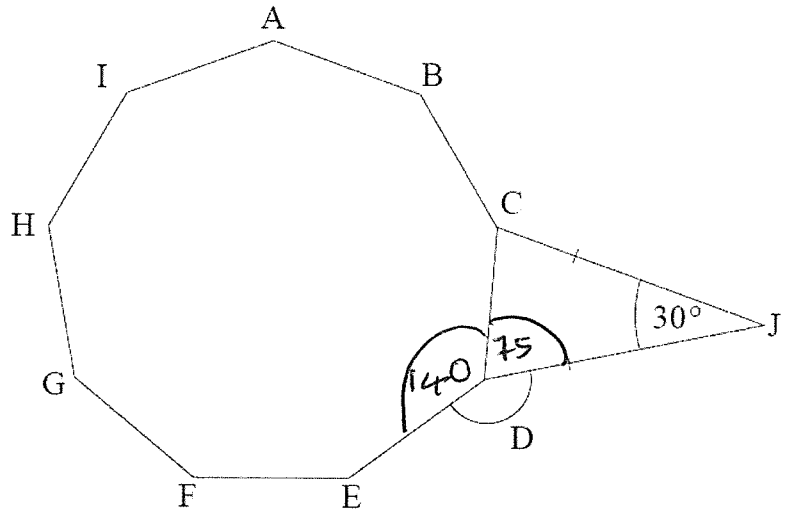


diagram not drawn accurately

The diagram shows a regular nonagon ABCDEFGHI with an isosceles triangle DCJ attached.

9 sides.

The angle DJC = 30°

Calculate the size of the angle EDJ.

Show your working clearly.

For regular 9 sided

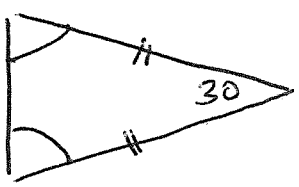
exterior angle = 360° ÷ no of sides

exterior angle = 360 ÷ 9

exterior angle = 40

Exterior + Interior = 180

40 + 140 = 180



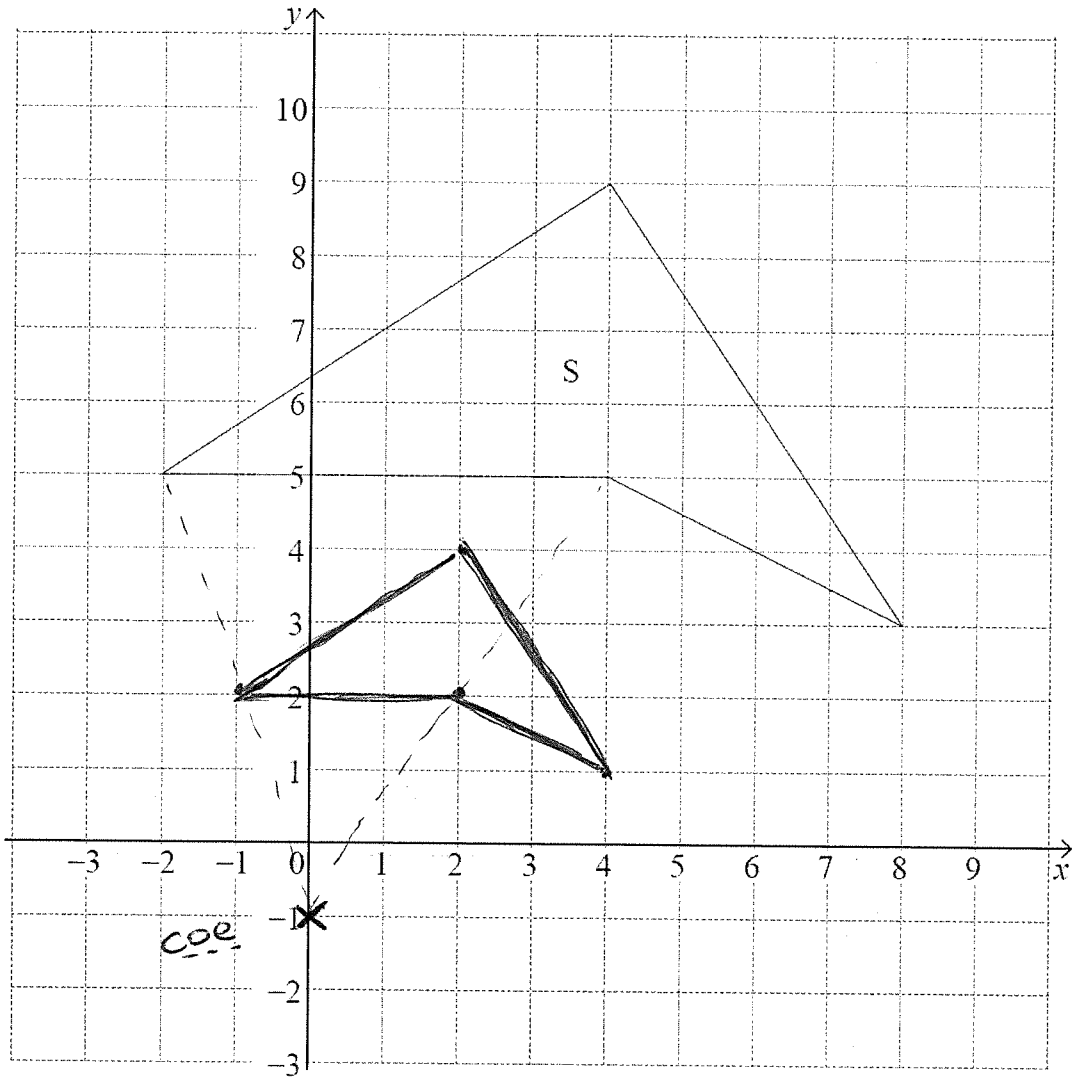
isosceles triangle

150 ÷ 2 = 75

EDJ = 360 − 140 − 75

EDJ = 145°

13



½ size

(a) On the grid above, draw an enlargement of the shape S, using a scale factor of $\frac{1}{2}$ and centre (0, −1). [3]

Always count squares from the centre of enlargement.

(b) If the shape S has an area of 20 cm², what is the area of the enlarged shape?

Small shape ⟶ Big shape

Lines $\xrightarrow[\times 2]{\times k}$ cm Answer 5 cm² [1]

Area $\xrightarrow[\times 4]{\times k^2}$ 20 cm²

5 cm²