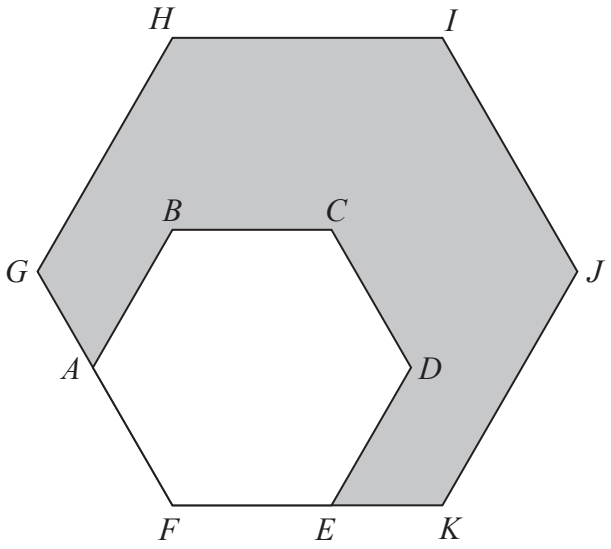
1

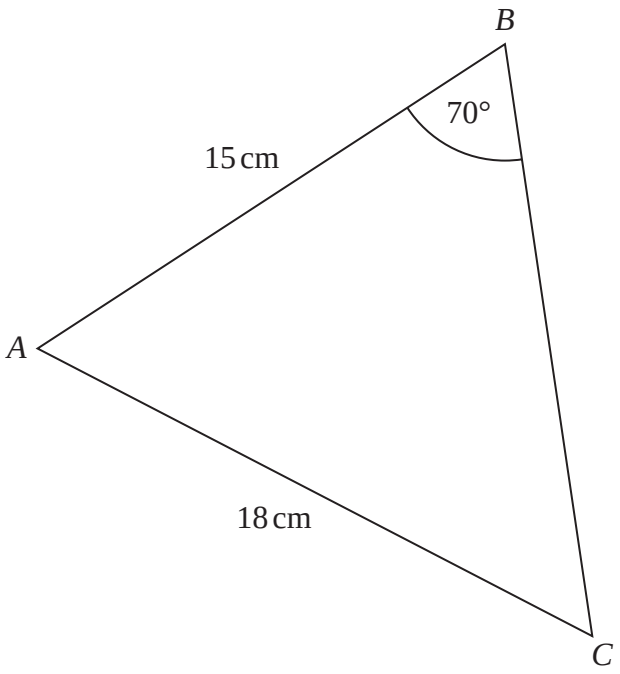


ABCDEF is a regular hexagon with sides of length x.
This hexagon is enlarged, centre F, by scale factor p to give hexagon *FGHIJK*.

Show that the area of the shaded region in the diagram is given by $\frac{3\sqrt{3}}{2}(p^2 - 1)x^2$

(Total for Question 1 is 4 marks)

2 *ABC* is a triangle.

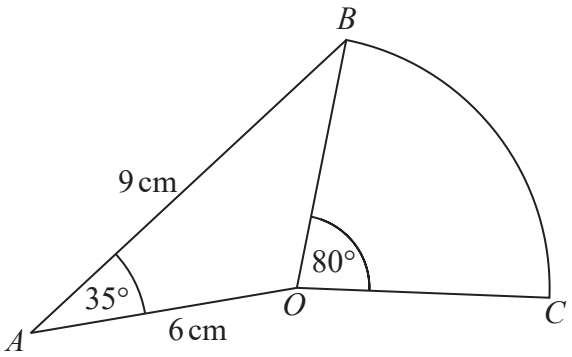


Calculate the size of angle *BAC*.
Give your answer correct to 1 decimal place.

.....°

(Total for Question 2 is 4 marks)

3 *OAB* is a triangle.
OBC is a sector of a circle, centre *O*.



Calculate the area of *OBC*.
Give your answer correct to 3 significant figures.

..... cm^2

(Total for Question 3 is 4 marks)