

- 2 Each interior angle of a regular polygon is 162°

Work out the number of sides the polygon has.

(Total for Question 2 is 3 marks)

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3

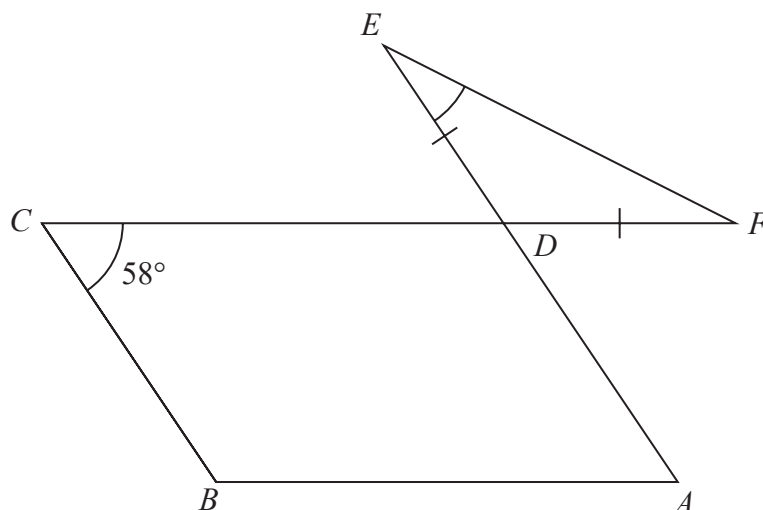


Diagram **NOT**
accurately drawn

The diagram shows a parallelogram $ABCD$ and an isosceles triangle DEF in which $DE = DF$

CDF and ADE are straight lines.

Angle $BCD = 58^\circ$

Work out the size of angle DEF .

Give a reason for each stage of your working.

(Total for Question 3 is 5 marks)



P 6 2 6 5 7 A 0 5 2 4

- 4 The diagram shows a pentagon.

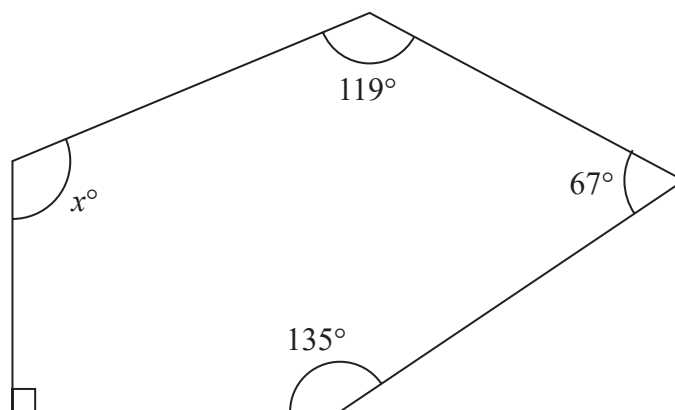


Diagram **NOT**
accurately drawn

Work out the value of x

$x =$

(Total for Question 4 is 3 marks)

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- 4 The diagram shows a regular octagon $ABCDEFGH$ and a regular pentagon $ABIJK$

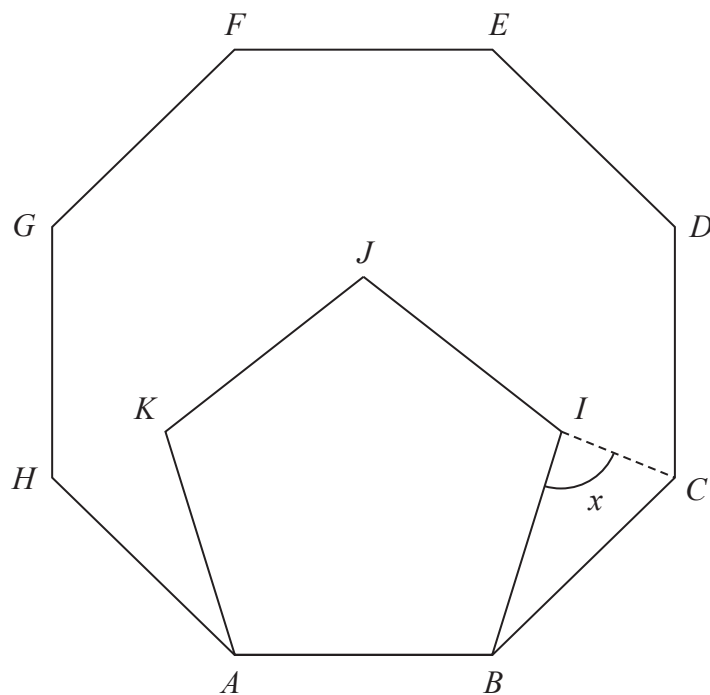


Diagram **NOT**
accurately drawn

Work out the size of the angle x

(Total for Question 4 is 4 marks)



- 4 The diagram shows parts of three regular polygons, **A**, **B** and **C**, meeting at a point.

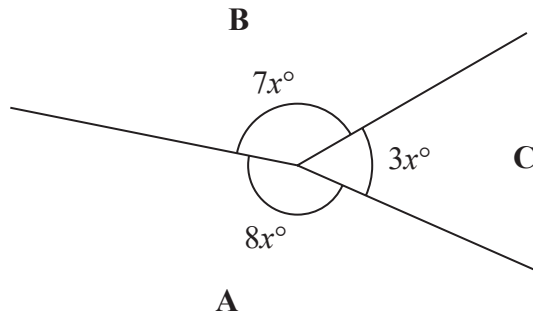


Diagram **NOT**
accurately drawn

Polygon **B** has n sides.

Work out the value of n .

$n = \dots\dots\dots$

(Total for Question 4 is 4 marks)

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5

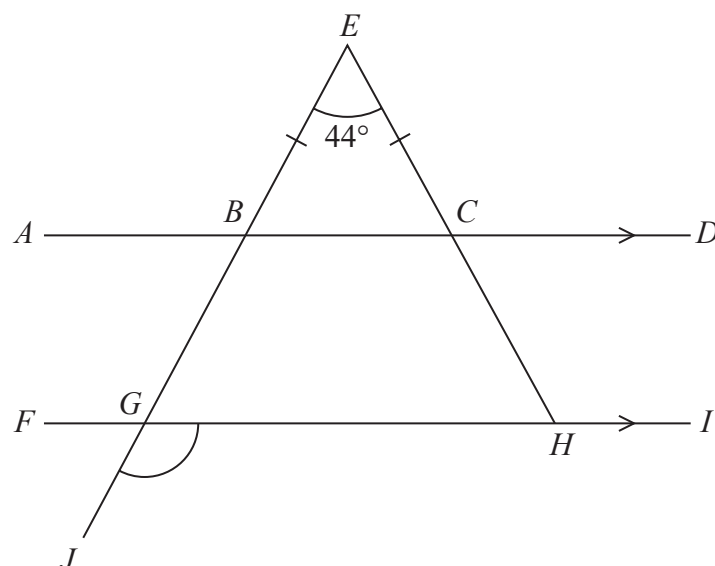


Diagram **NOT**
accurately drawn

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$ABCD$ and $FGHI$ are parallel straight lines.
 $EBGJ$ and ECH are straight lines.

$$BE = CE$$

$$\text{Angle } BEC = 44^\circ$$

Work out the size of angle JGH .

Give a reason for each stage of your working.

(Total for Question 5 is 5 marks)



- 8 Here is a 10-sided polygon.

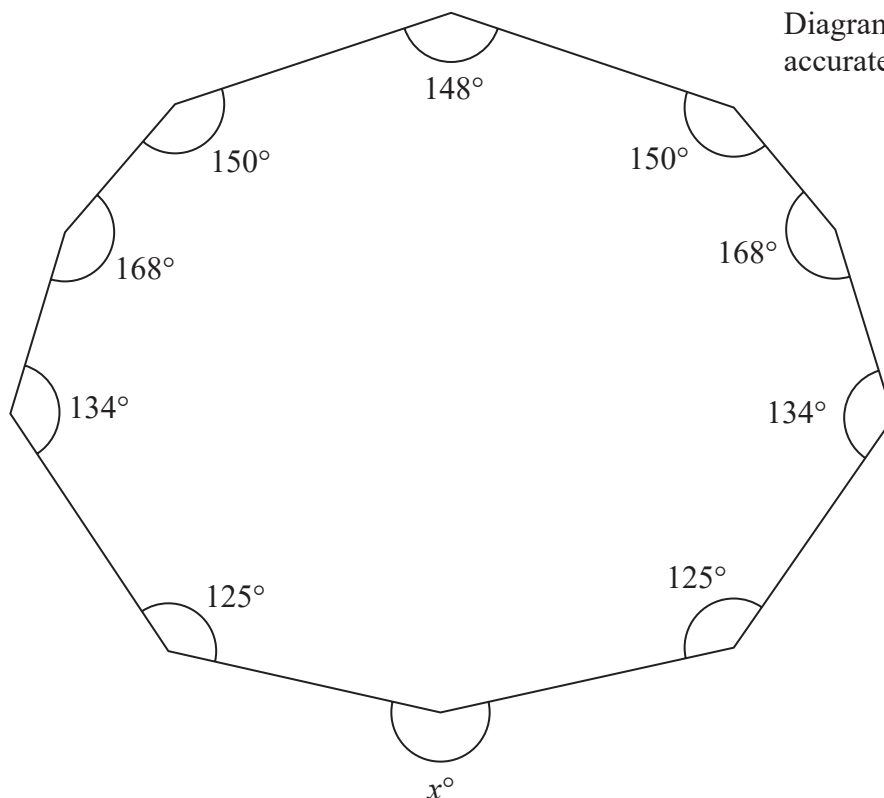


Diagram **NOT** accurately drawn

Work out the value of x .

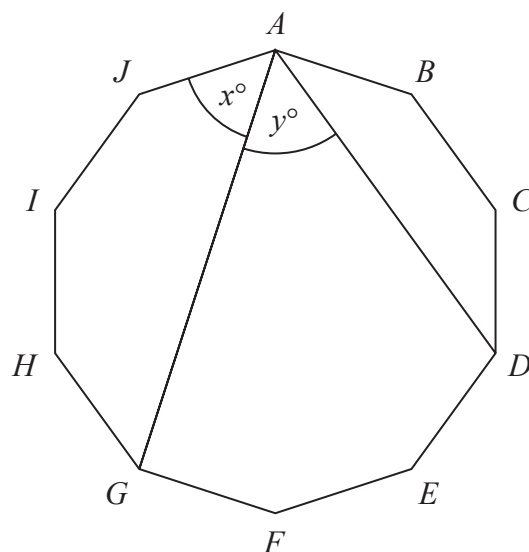
$x =$

(Total for Question 8 is 4 marks)



- 11 The diagram shows a regular 10-sided polygon, $ABCDEFGHIJ$

Diagram **NOT**
accurately drawn



Show that $x = y$

(Total for Question 11 is 4 marks)



12

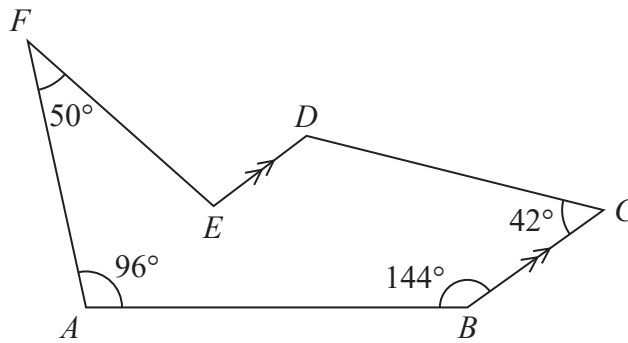


Diagram **NOT**
accurately drawn

The diagram shows a hexagon $ABCDEF$.
 BC is parallel to ED .

Work out the size of the obtuse angle DEF .

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(Total for Question 12 is 5 marks)



15

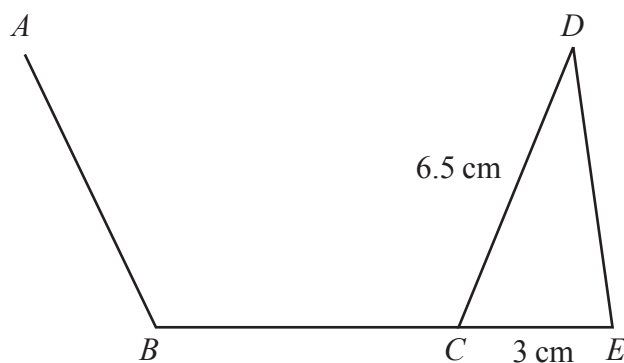


Diagram **NOT**
accurately drawn

AB , BC and CD are three sides of a regular pentagon and CDE is a triangle.
 BCE is a straight line.

$$CD = 6.5 \text{ cm} \quad CE = 3 \text{ cm}$$

Work out the area of triangle CDE
Give your answer correct to 3 significant figures.

..... cm^2

(Total for Question 15 is 3 marks)



- 22 The diagram shows a regular octagon $ABCDEFGH$.

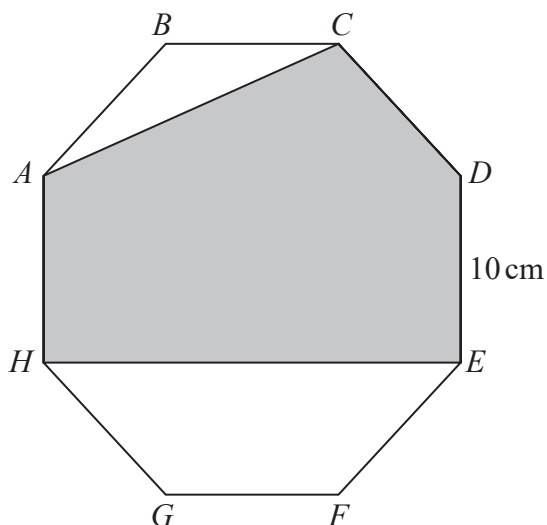


Diagram **NOT**
accurately drawn

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Each side of the octagon has length 10 cm.

Find the area of the shaded region $ACDEH$.
Give your answer correct to the nearest cm^2

..... cm^2

(Total for Question 22 is 6 marks)

