

Questions

Q1.

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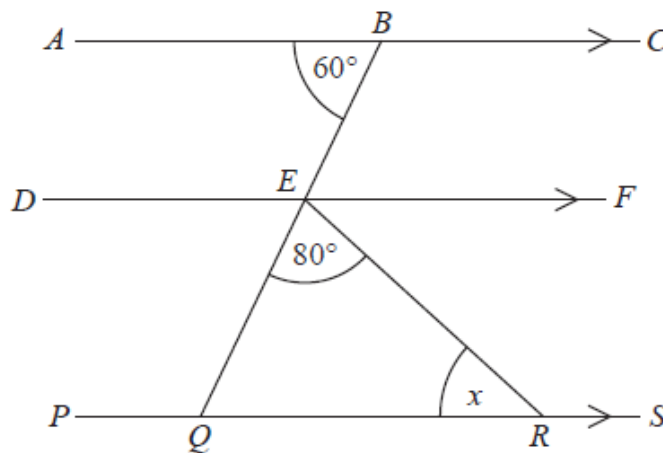


Diagram **NOT**
accurately drawn

ABC , DEF and $PQRS$ are parallel lines.
 BEQ is a straight line.

Angle $ABE = 60^\circ$
Angle $QER = 80^\circ$

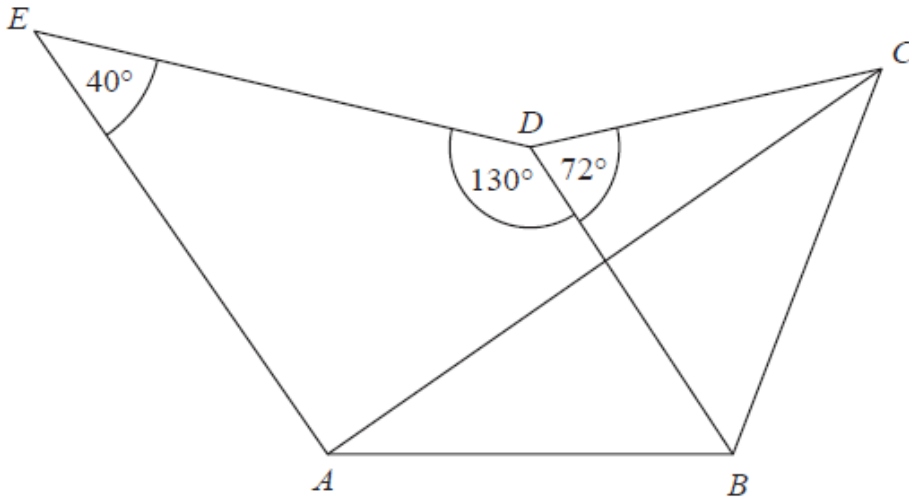
Work out the size of the angle marked x .
Give reasons for each stage of your working.

(Total for question = 4 marks)

Q2.

Here is a pentagon $ABCDE$.

Diagram **NOT**
accurately drawn



$AB = BC = BD$
 $ABDE$ is a kite.

Angle $AED = 40^\circ$
Angle $EDB = 130^\circ$
Angle $BDC = 72^\circ$

Work out the size of angle ACB .

.....^o

(Total for question = 3 marks)

Q3.

$ABCDEFGHI$ is a regular 9-sided polygon.

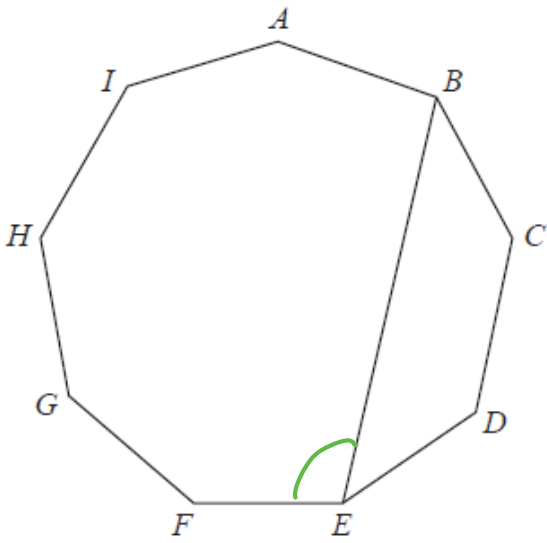


Diagram NOT accurately drawn

The vertices B and E are joined with a straight line.

Work out the size of angle BEF .
You must show how you get your answer.

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(Total for question = 4 marks)

Q4.

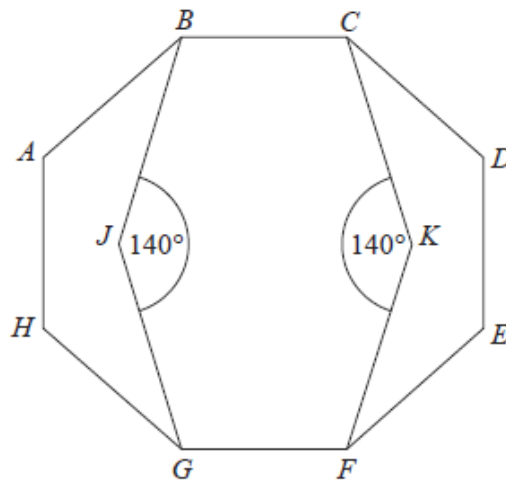


Diagram NOT accurately drawn

$ABCDEFGH$ is a regular octagon.
 $BCKFGJ$ is a hexagon.

JK is a line of symmetry of the hexagon.
Angle $BJG = \text{angle } CKF = 140^\circ$

Work out the size of angle KFE .
You must show all your working.

(Total for Question is 4 marks)

Q5.

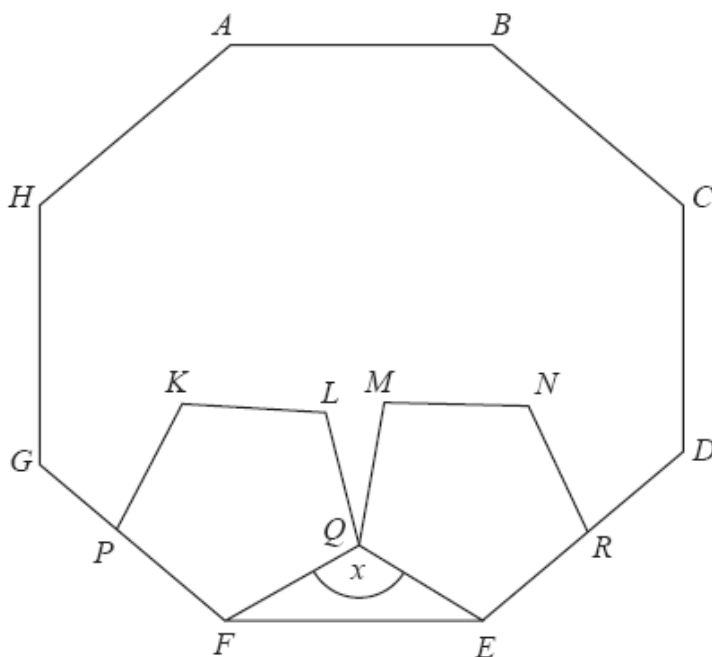


Diagram NOT accurately drawn

$ABCDEFGH$ is a regular octagon.
 $KLQPF$ and $MNREQ$ are two identical regular pentagons.

Work out the size of the angle marked x .
You must show all your working.

(Total for question = 4 marks)

Q6.

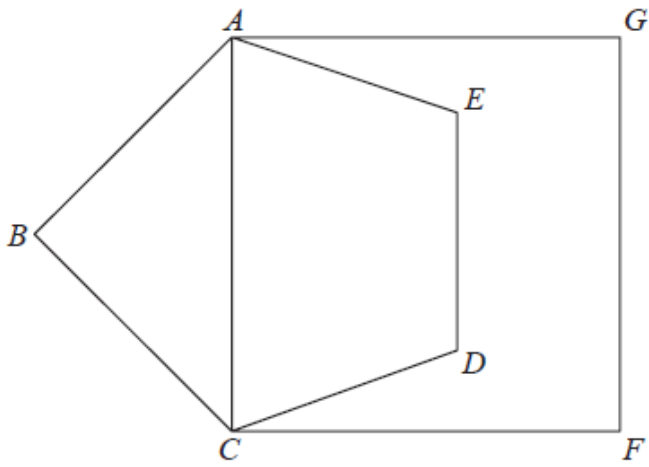


Diagram NOT accurately drawn

$ABCDE$ is a regular pentagon.
 $ACFG$ is a square.

Work out the size of angle DCF .
 You must show all your working.

.....°

(Total for question = 4 marks)

Q7. The diagram shows a pattern using four identical rhombuses.

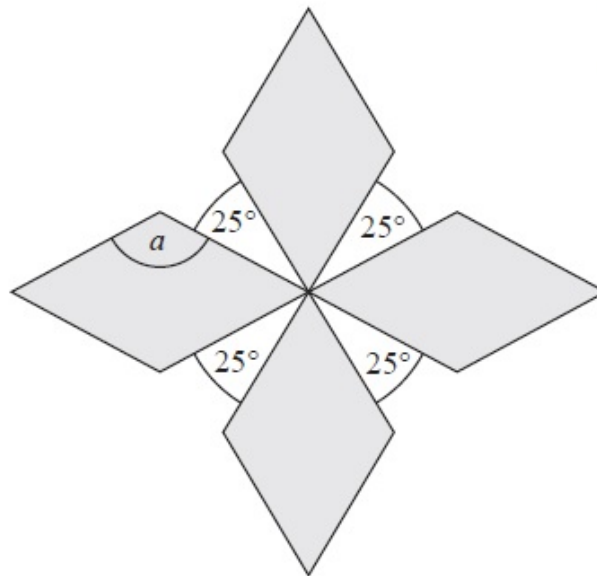


Diagram NOT accurately drawn

Work out the size of the angle marked a .

You must show your working.

.....°

(Total for Question is 4 marks)

Q8.

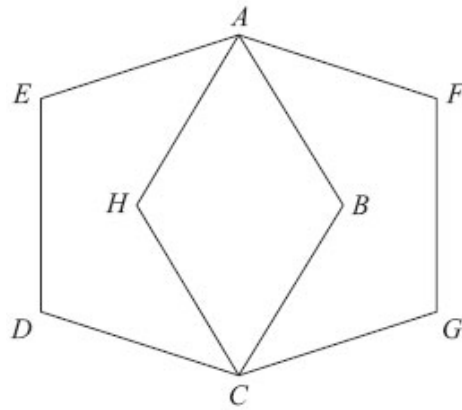


Diagram **NOT** accurately drawn

$ABCDE$ and $AFGCH$ are regular pentagons.
The two pentagons are the same size.

Work out the size of angle EAH .
You must show how you got your answer.

.....^o

(Total for Question is 4 marks)

Q9.

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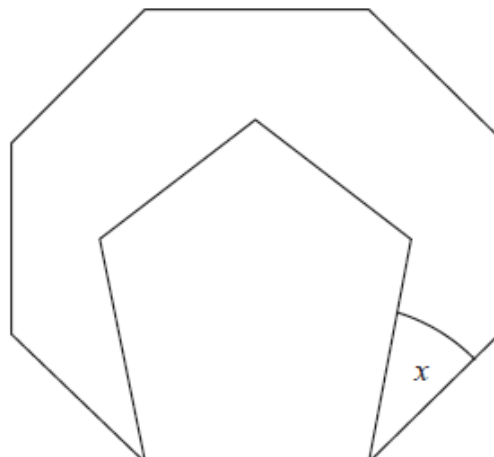


Diagram **NOT** accurately drawn

The diagram shows two regular polygons.

Find the size of the angle marked x .

Give reasons for your answer.

(Total for question = 4 marks)

Q10.

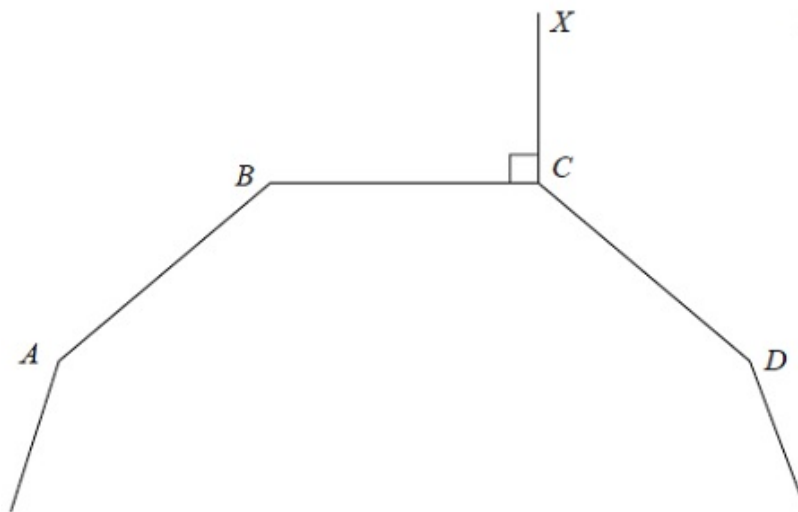


Diagram NOT accurately drawn

A , B , C and D are four vertices of a regular 10-sided polygon.

Angle $BCX = 90^\circ$.

Work out the size of angle DCX .

.....^o

(Total for Question is 3 marks)

Q11.

$ABCDE$ and $PQRST$ are regular pentagons.

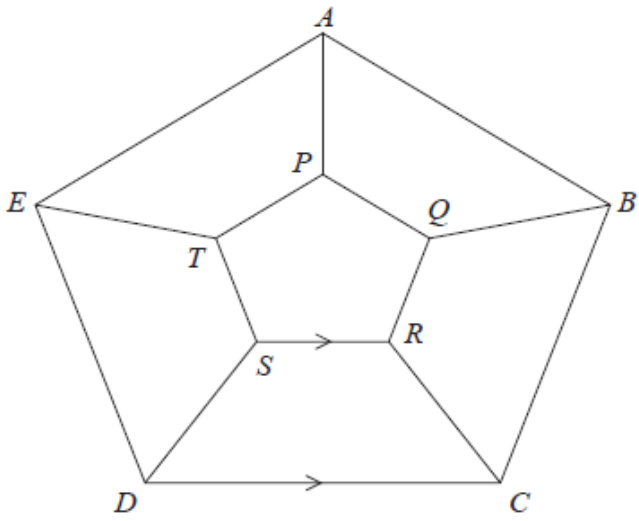


Diagram NOT accurately drawn

SR is parallel to DC
 $AP = BQ = CR = DS = ET$

Work out the size of angle SRC .
 You must show all your working.

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(Total for question = 3 marks)

Q12.

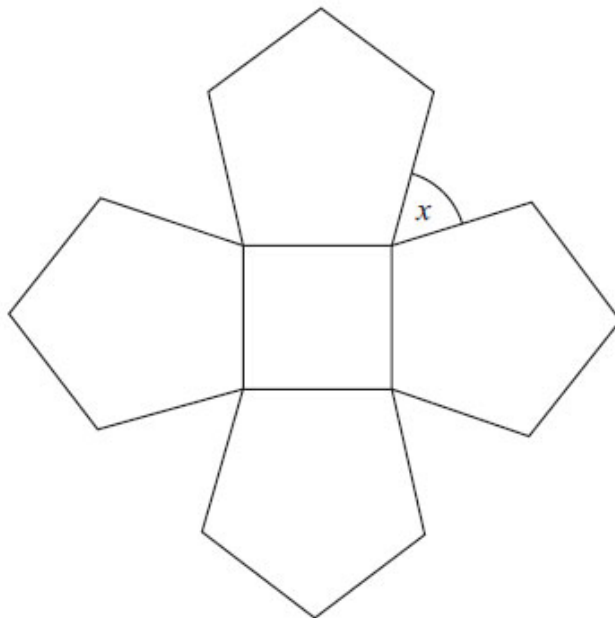


Diagram NOT accurately drawn

The diagram shows a square and 4 regular pentagons.

Work out the size of the angle marked x .

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(Total for Question is 3 marks)