1 Jenna measures all the angles around a point.

Her results are 23°, 145°, 23° and 69°

Explain why these results cannot be true.

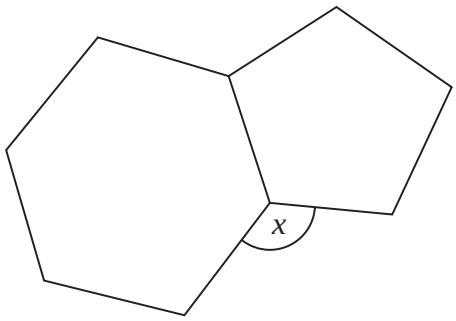
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.....

(Total for Question 1 is 1 mark)

2 Here is a regular hexagon and a regular pentagon.

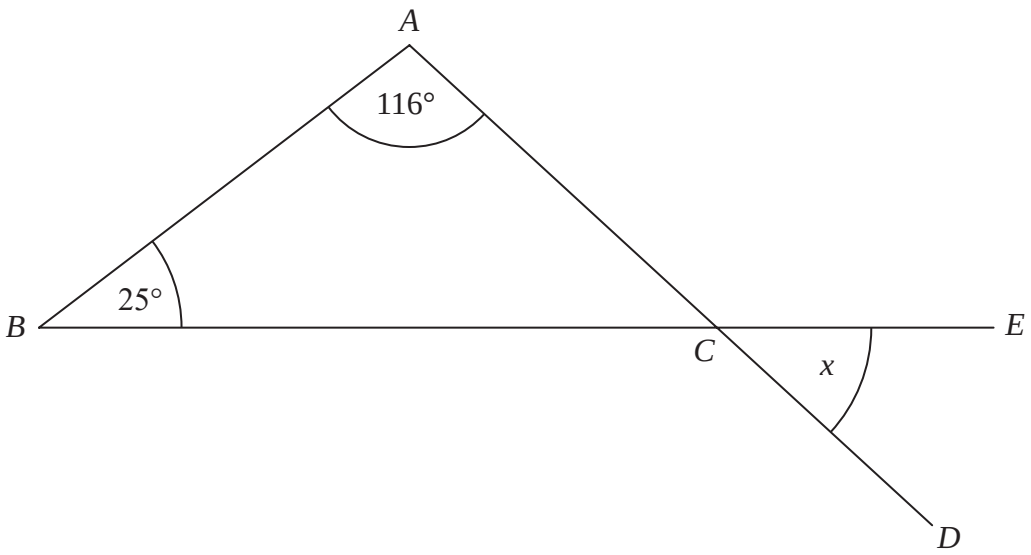


Work out the size of the angle marked x.
You must show all your working.

.....°

(Total for Question 2 is 3 marks)

3 The diagram shows a triangle *ABC*.



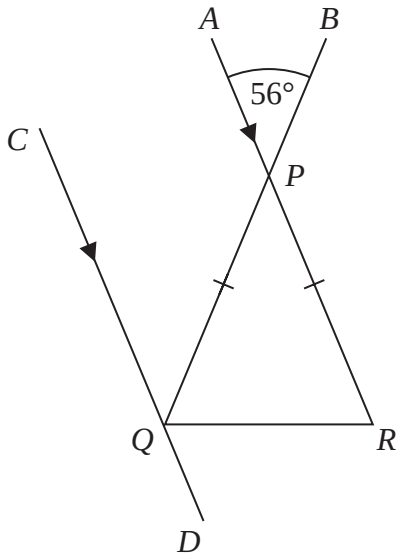
ACD and *BCE* are straight lines.

Work out the size of the angle marked *x*.
Give a reason for each stage of your working.

.....°

(Total for Question 3 is 3 marks)

4 In the diagram, *PQR* is an isosceles triangle with *PQ* = *PR*.



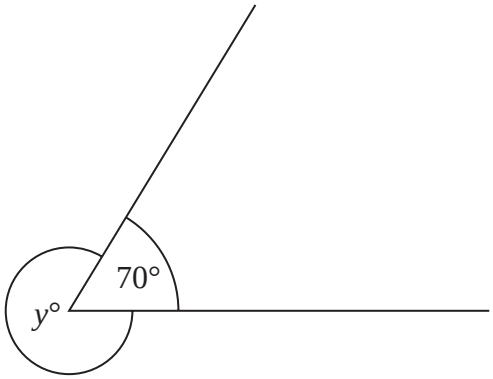
APR and *CQD* are parallel lines.
BPQ is a straight line.

Angle *APB* = 56°

Work out the size of angle *CQR*.
Give a reason for each stage of your working.

(Total for Question 4 is 5 marks)

5



(a) Find the value of y.

$y =$ .....

(1)

(b) Give a reason for your answer.

.....

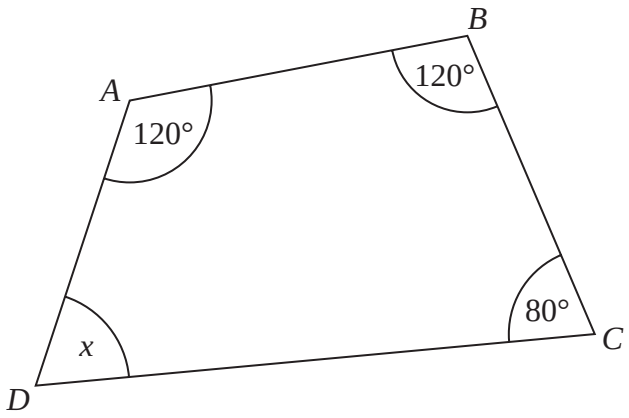
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(1)

(Total for Question 5 is 2 marks)

6 *ABCD* is a quadrilateral.



(a) (i) Work out the size of angle *x*.

.....°

(1)

(ii) Give a reason for your answer.

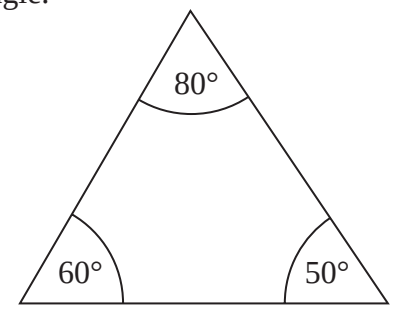
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(1)

The diagram below shows a triangle.



The diagram is wrong.

(b) Explain why.

.....

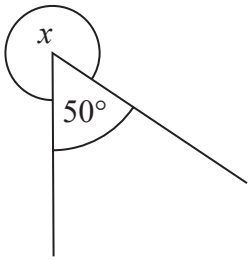
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(1)

(Total for Question 6 is 3 marks)

7



(a) Work out the size of the angle marked x.

.....°

(2)

A student says that an angle of 50° is an obtuse angle.

The student is wrong.

(b) Explain why.

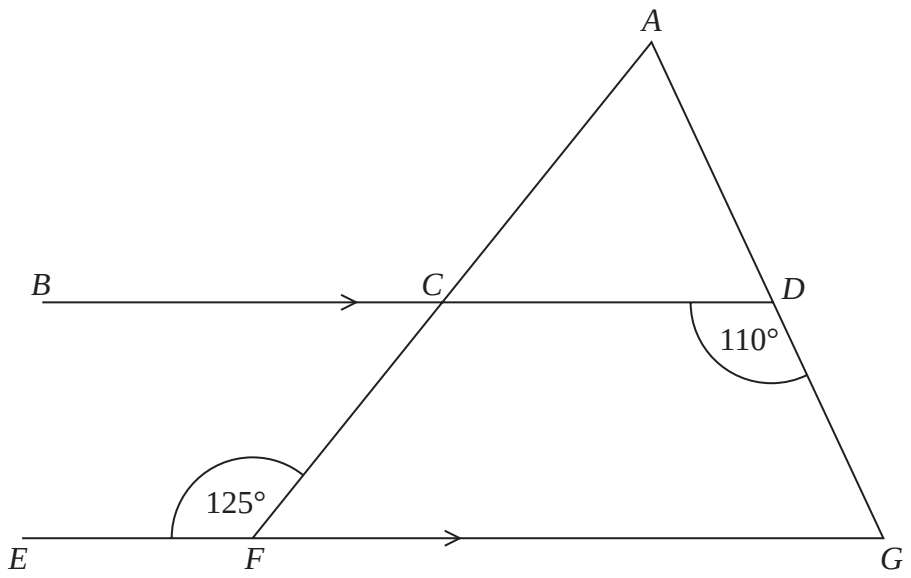
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(1)

(Total for Question 7 is 3 marks)

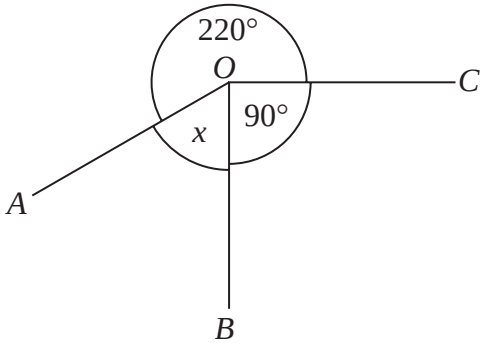
8 *ACF* and *ADG* are straight lines.
BCD and *EFG* are parallel lines.



Show that triangle *ACD* is isosceles.
Give a reason for each stage of your working.

(Total for Question 8 is 5 marks)

9 *OA*, *OB* and *OC* are three straight lines.



(i) Work out the size of the angle marked *x*.

.....°

(2)

(ii) Give a reason for your answer.

.....

.....

.....

(1)

(Total for Question 9 is 3 marks)