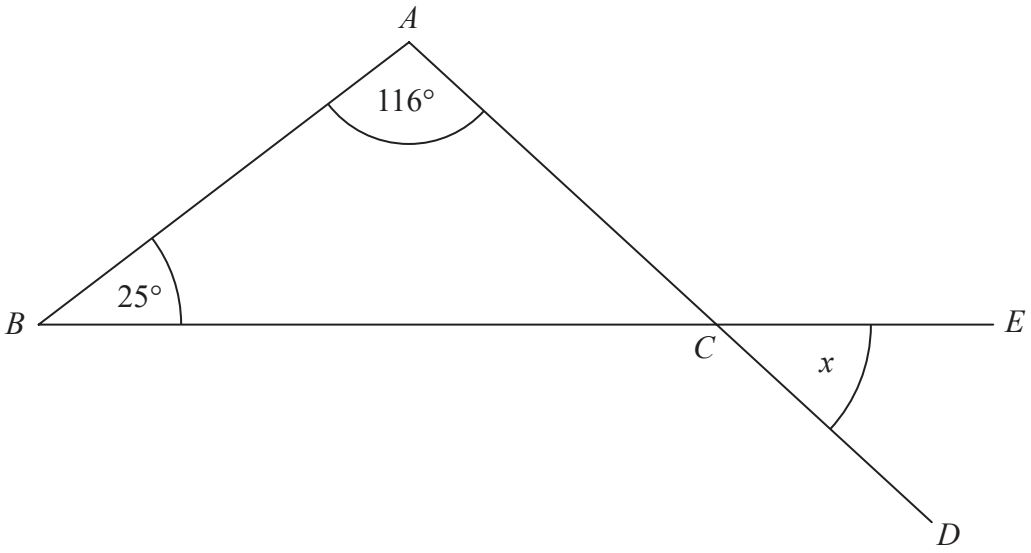
Angles in Polygons

11 The diagram shows a triangle *ABC*.



ACD and *BCE* are straight lines.

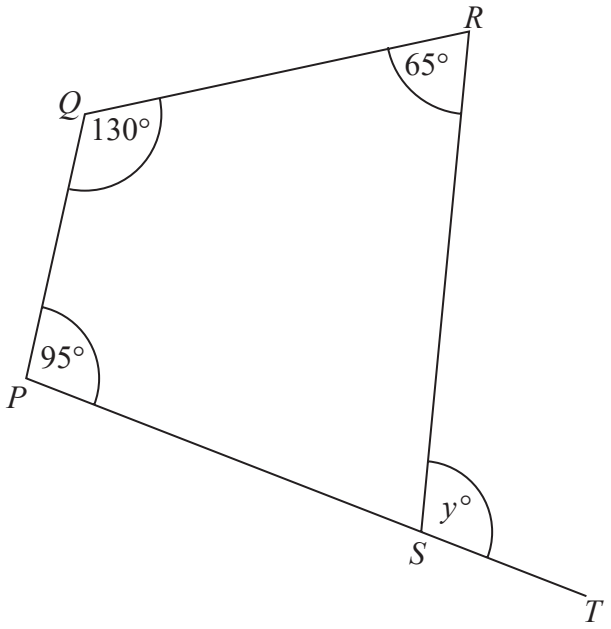
Work out the size of the angle marked *x*.
Give a reason for each stage of your working.

.....°

.....

(Total for Question 11 is 3 marks)

11 *PQRS* is a quadrilateral.
PST is a straight line.

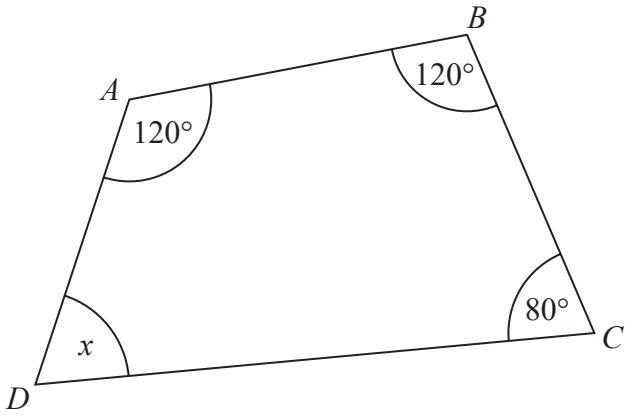


Find the value of y.

$y =$ .....

(Total for Question 11 is 3 marks)

13 *ABCD* is a quadrilateral.



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

.....°

(1)

(ii) Give a reason for your answer.

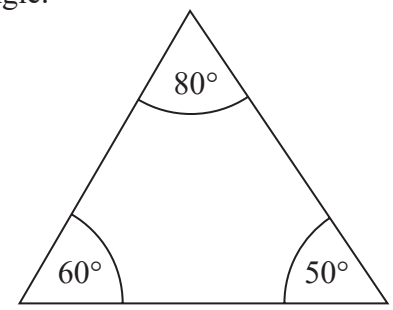
.....

.....

.....

(1)

The diagram below shows a triangle.



The diagram is wrong.

(b) Explain why.

.....

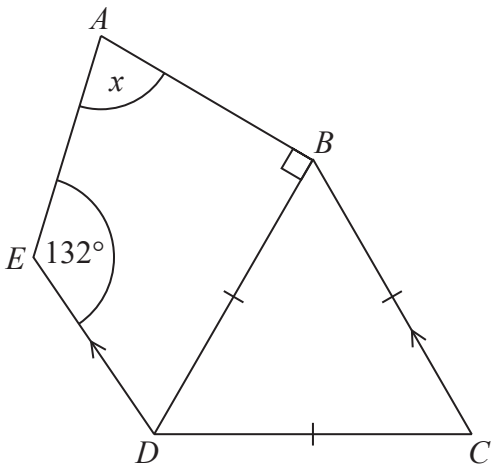
.....

.....

(1)

(Total for Question 13 is 3 marks)

19 The diagram shows a quadrilateral *ABDE* and an equilateral triangle *BCD*.



CB is parallel to *DE*.

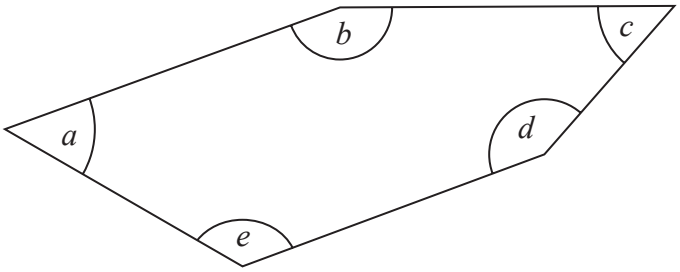
Angle *AED* = 132°

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

.....°

(Total for Question 19 is 4 marks)

23 Here is a pentagon.



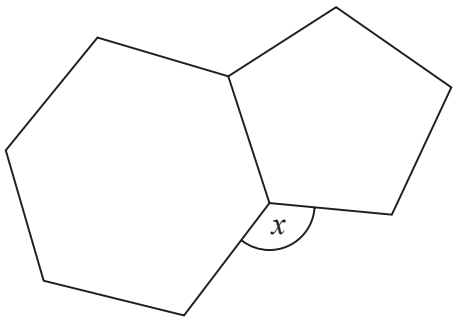
Angle a = angle c
Angle $b = 155°$
Angle d is three times the size of angle c
Angle e is two times the size of angle c

Work out the size of angle a

.....°

(Total for Question 23 is 4 marks)

27 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 27 is 3 marks)

28 Each exterior angle of a regular polygon is 15°

Work out the number of sides of the polygon.

.....

(Total for Question 28 is 2 marks)