

1MA1 Foundation themed papers: Angles

Write your name here			
Surname	Other names		
Centre Number		Candidate Number	
Pearson Edexcel Level 1/Level 2 GCSE (9–1)			
Mathematics Angles			
Foundation Tier		Paper Reference 1MA1	
You must have: Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser, calculator. Tracing paper may be used.			Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- You must **show all your working.**
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- If your calculator does not have a π button, take the value of π to be 3.142 unless the question instructs otherwise.

Information

- The total mark for this paper is **40**. There are **11** questions.
- Questions have been arranged in an ascending order of mean difficulty, as found by all students in the June 2017–November 2019 examinations.
- The marks for **each** question are shown in brackets – *use this as a guide as to how much time to spend on each question.*

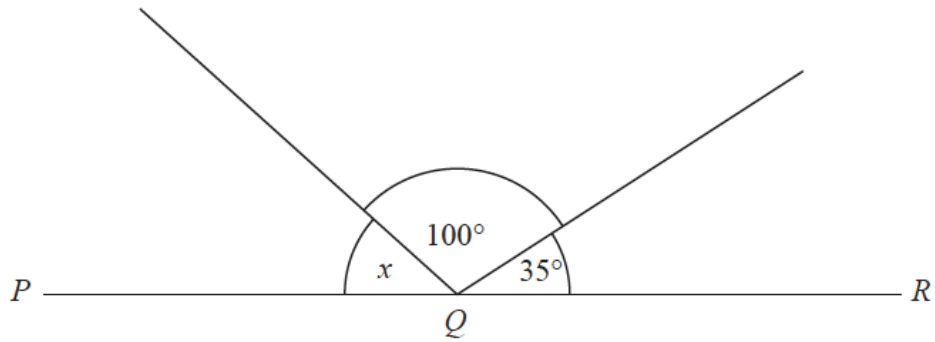
Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

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1 PQR is a straight line.



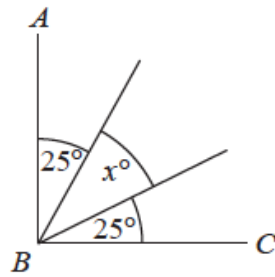
Work out the size of angle x .

.....^o
(Total for Question 1 is 2 marks)

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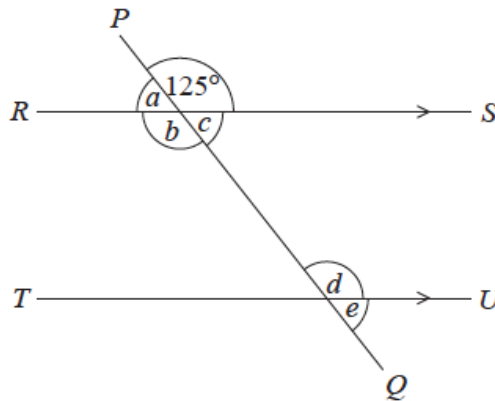
2 *AB* and *BC* are perpendicular lines.



(a) Find the value of x .

$x = \dots\dots\dots$ (2)

RS and *TU* are parallel lines.
PQ is a straight line.



An angle of size 125° is shown on the diagram.

(b) (i) Write down the letter of one other angle of size 125°
Give a reason for your answer.

.....
..... (2)

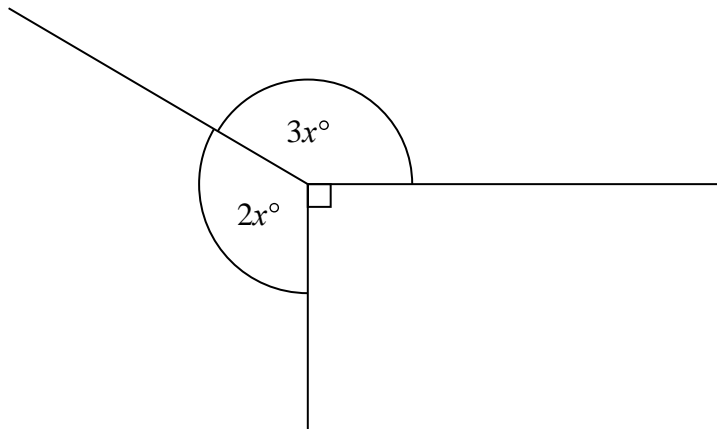
(ii) Explain why $a + b + c = 235^\circ$

.....
.....
..... (1)

(Total for Question 2 is 5 marks)

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3

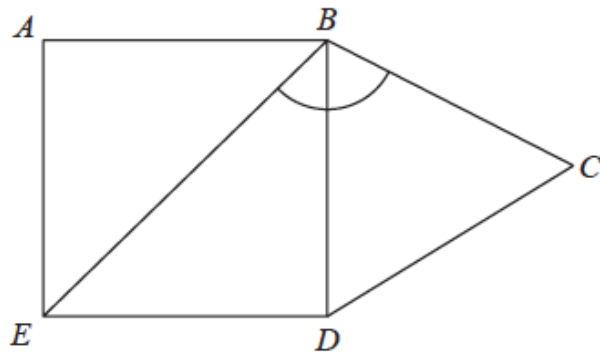


Find the value of x .

.....
(Total for Question 3 is 3 marks)

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- 4 The diagram shows a square $ABDE$ and an equilateral triangle BCD .



Work out the size of angle EBC .

.....^o
(Total for Question 4 is 2 marks)

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- 5** The size of the largest angle in a triangle is 4 times the size of the smallest angle.
The other angle is 27° less than the largest angle.

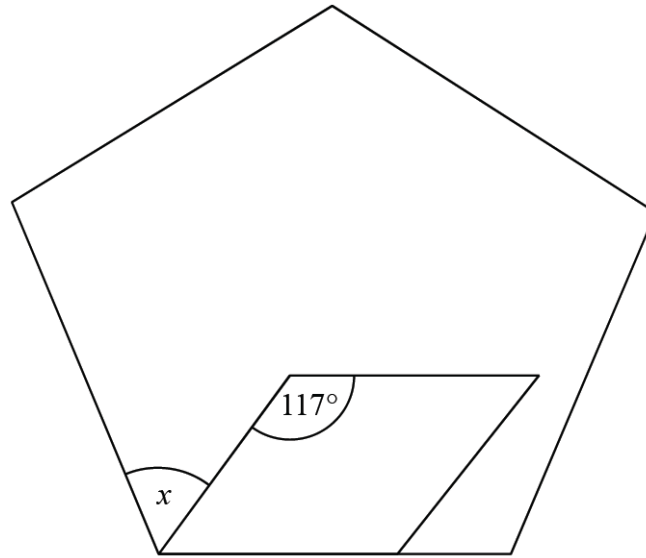
Work out, in degrees, the size of each angle in the triangle.
You must show your working.

..... $^\circ$, $^\circ$, $^\circ$

(Total for Question 5 is 5 marks)

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- 6** The diagram shows a regular pentagon and a parallelogram.

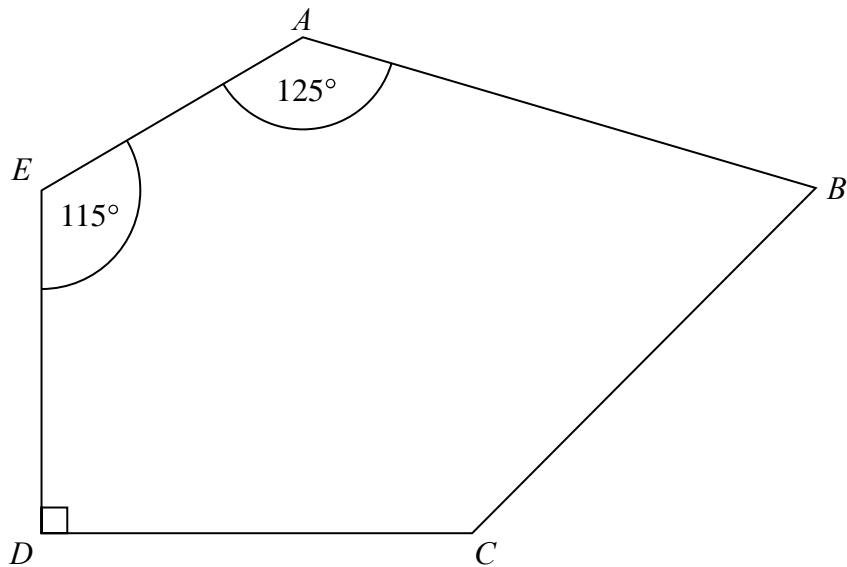


Work out the size of the angle marked x .
You must show all your working.

(Total for Question 6 is 4 marks)

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7 $ABCDE$ is a pentagon.



Angle $BCD = 2 \times$ angle ABC

Work out the size of angle BCD .

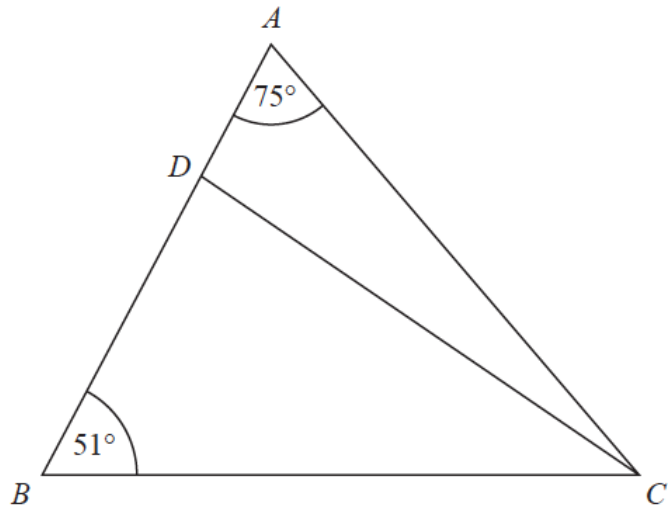
You must show all your working.

(Total for Question 7 is 5 marks)

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8 The diagram shows triangle ABC .



ADB is a straight line.

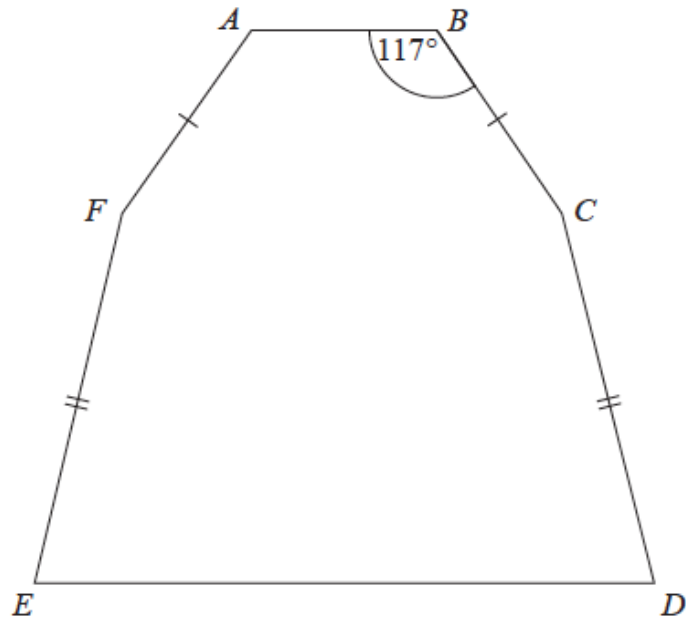
the size of angle DCB : the size of angle $ACD = 2 : 1$

Work out the size of angle BDC .

(Total for Question 8 is 4 marks)

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- 9** The diagram shows a hexagon.
The hexagon has one line of symmetry.



$FA = BC$
 $EF = CD$
Angle $ABC = 117^\circ$

Angle $BCD = 2 \times$ angle CDE

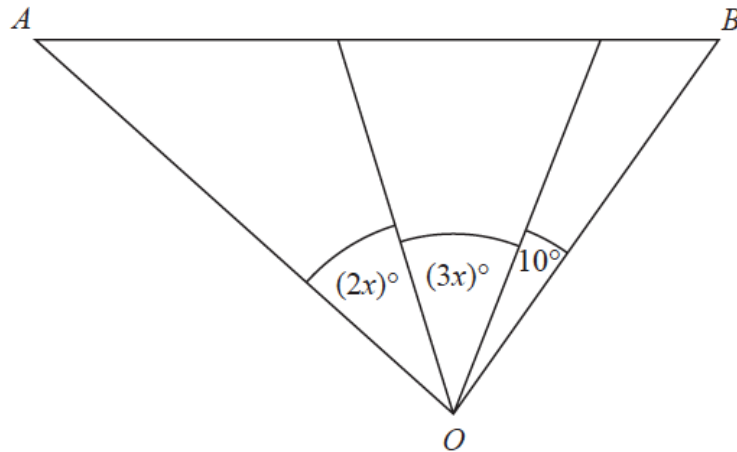
Work out the size of angle AFE .
You must show all your working.

.....^o
(Total for Question 9 is 4 marks)

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10 The diagram shows triangle AOB .



Angle AOB is **not** an obtuse angle.

Find the greatest value of x .

You must show all your working.

.....
(Total for Question 10 is 3 marks)

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- 11** The size of each interior angle of a regular polygon is 11 times the size of each exterior angle.
Work out how many sides the polygon has.

.....
(Total for Question 11 is 3 marks)

TOTAL MARKS FOR PAPER: 40