

## 1MA1 Higher themed papers: Angles

Write your name here	
Surname	Other names
Centre Number	Candidate Number
Pearson Edexcel Level 1/Level 2 GCSE (9–1)	
<b>Mathematics</b> <b>Angles</b>	
	Paper Reference <b>1MA1</b>
<b>You must have:</b> 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  $\pi$  button, take the value of  $\pi$  to be 3.142 unless the question instructs otherwise.

### Information

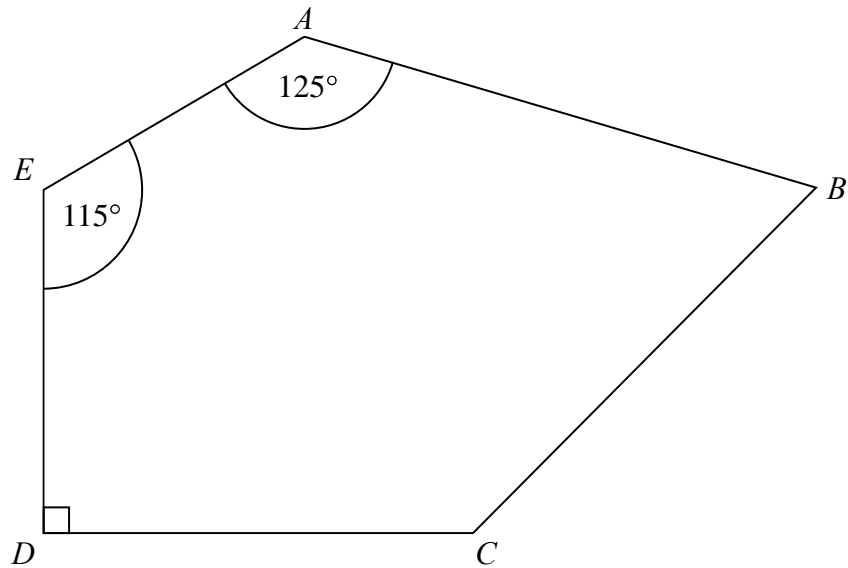
- The total mark for this paper is **22**. There are **5** questions.
- Questions have been arranged in an ascending order of mean difficulty, as found by all students in the June 2017–November 2019 examinations.
- The marks for **each** question are shown in brackets – *use this as a guide as to how 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**  $ABCDE$  is a pentagon.



Angle  $BCD = 2 \times$  angle  $ABC$

Work out the size of angle  $BCD$ .

You must show all your working.

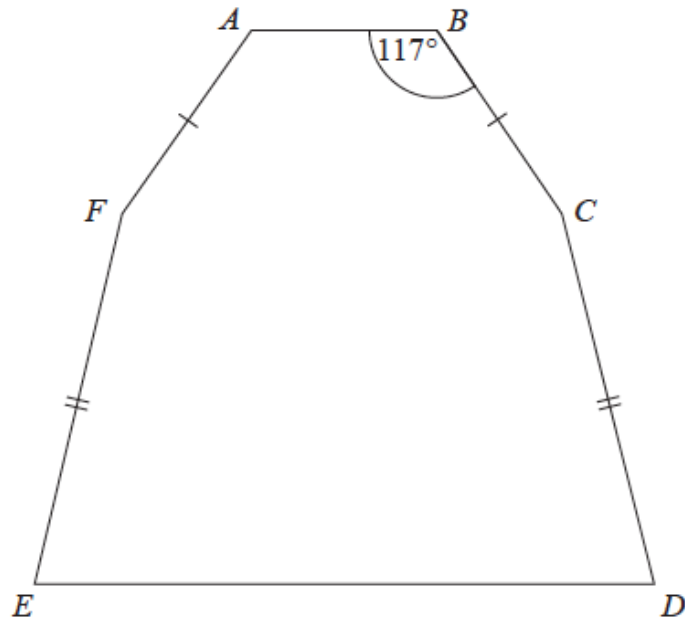
.....<sup>o</sup>

**(Total for Question 1 is 5 marks)**

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



$FA = BC$

$EF = CD$

Angle  $ABC = 117^\circ$

Angle  $BCD = 2 \times \text{angle } CDE$

Work out the size of angle  $AFE$ .

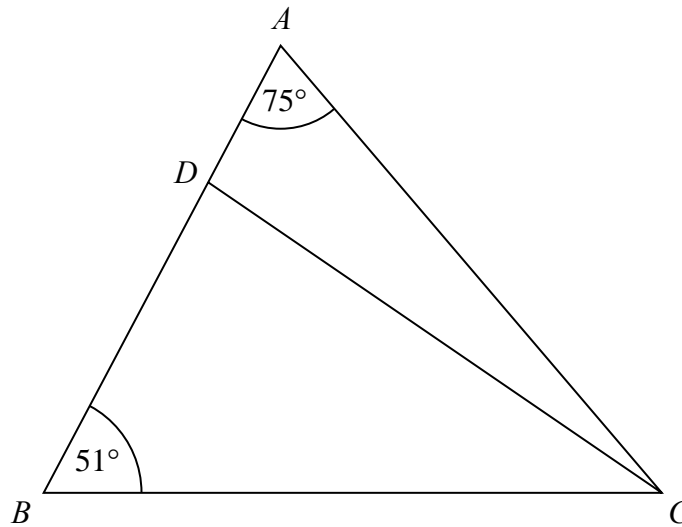
You must show all your working.

.....<sup>o</sup>

**(Total for Question 2 is 4 marks)**

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**3** The diagram shows triangle  $ABC$ .



$ADB$  is a straight line.

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

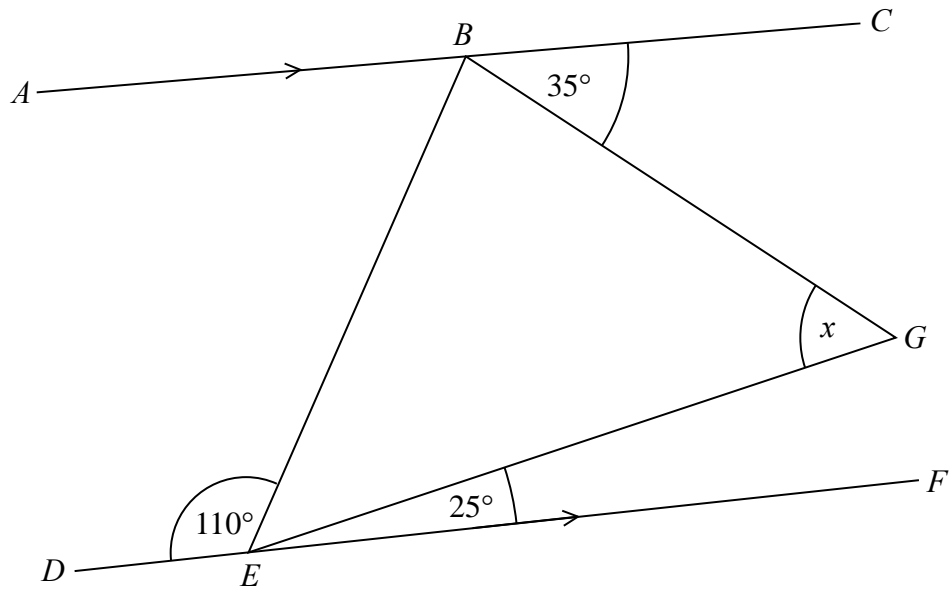
Work out the size of angle  $BDC$ .

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**(Total for Question 3 is 4 marks)**

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4  $BEG$  is a triangle.



$ABC$  and  $DEF$  are parallel lines.

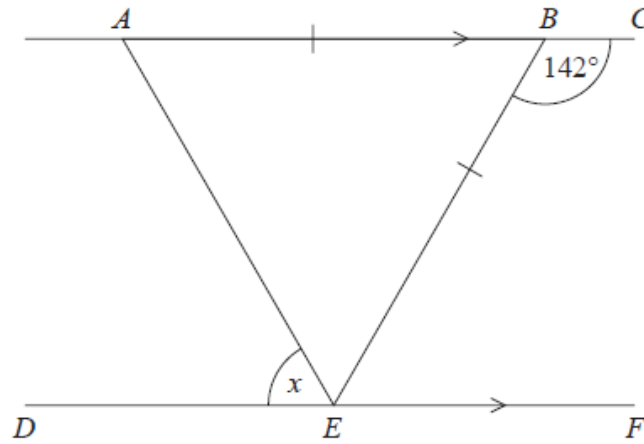
Work out the size of angle  $x$ .

Give a reason for each stage of your working.

.....°  
(Total for Question 4 is 4 marks)

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5



$ABC$  and  $DEF$  are parallel straight lines.  
 $ABE$  is an isosceles triangle with  $AB = BE$ .  
Angle  $CBE = 142^\circ$

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

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(Total for Question 5 is 5 marks)

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**TOTAL MARKS FOR PAPER: 21**