

1MA1 Higher themed papers: Angles

Write your name here						
Surname	Other names					
Pearson Edexcel Level 1/Level 2 GCSE (9–1)	Centre Number <table border="1"><tr><td></td><td></td><td></td><td></td><td></td></tr></table>					
	Candidate Number <table border="1"><tr><td></td><td></td><td></td><td></td><td></td></tr></table>					
Mathematics Angles						
	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 <table border="1"><tr><td></td></tr></table>						

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

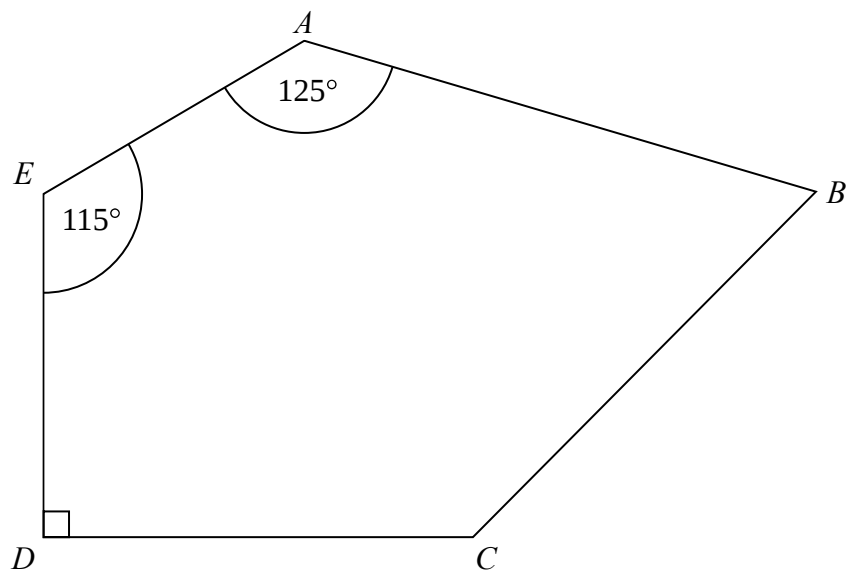
- The total mark for this paper is **22**. There are **5** questions.
- Questions have been arranged in an ascending order of mean difficulty, as found by all students in the June 2017–November 2019 examinations.
- The marks for **each** question are shown in brackets
– *use this as a guide as to how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

1MA1 Higher themed papers: Angles

- 1 $ABCDE$ is a pentagon.



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

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

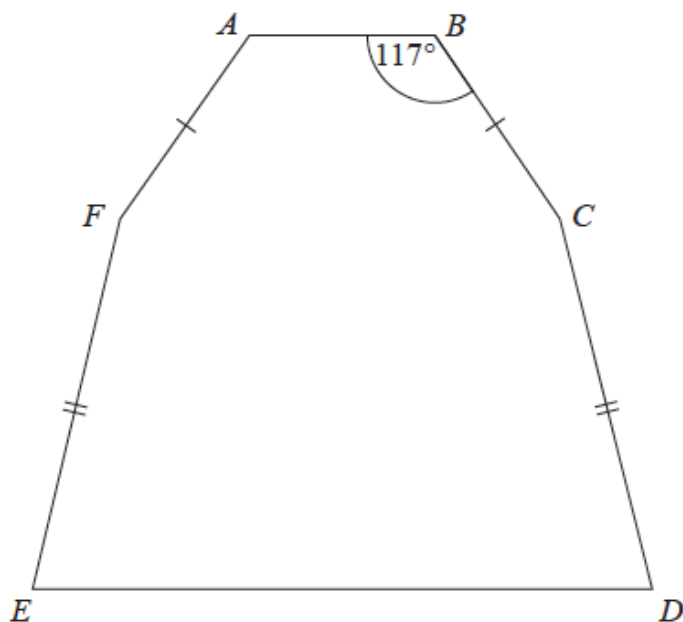
.....^o
(Total for Question 1 is 5 marks)

1MA1 Higher themed papers: Angles



2

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



$$FA = BC$$

$$FE = CD$$

$$\text{Angle } ABC = 117^\circ$$

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

Work out the size of angle AFE .

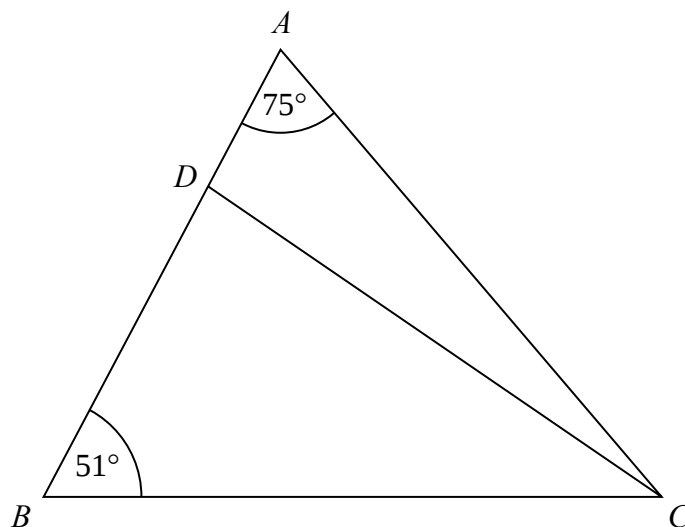
You must show all your working.

.....°

(Total for Question 2 is 4 marks)

1MA1 Higher themed papers: Angles

- 3 The diagram shows triangle ABC .



ADB is a straight line.

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

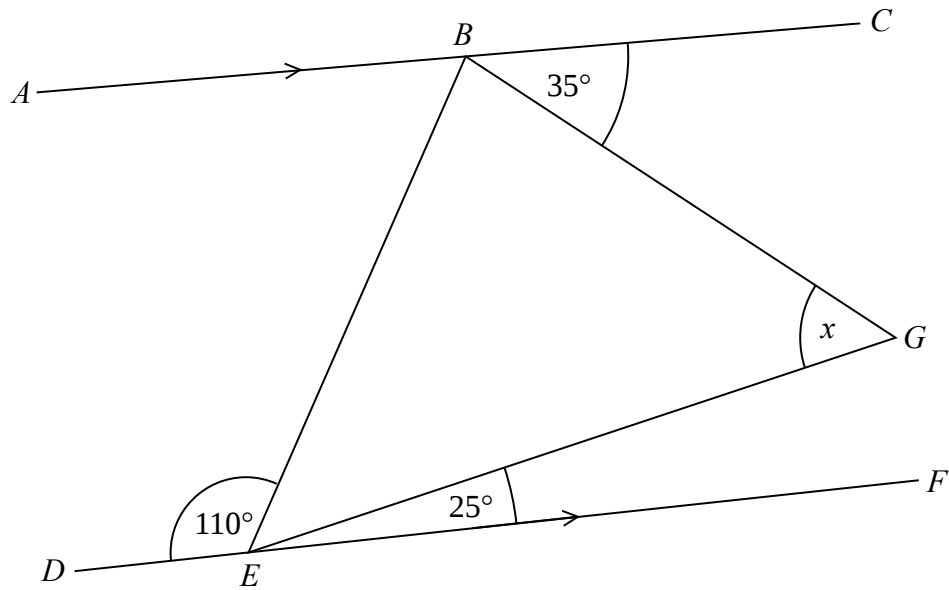
Work out the size of angle BDC .

.....^o
(Total for Question 3 is 4 marks)

1MA1 Higher themed papers: Angles



4 BEG is a triangle.



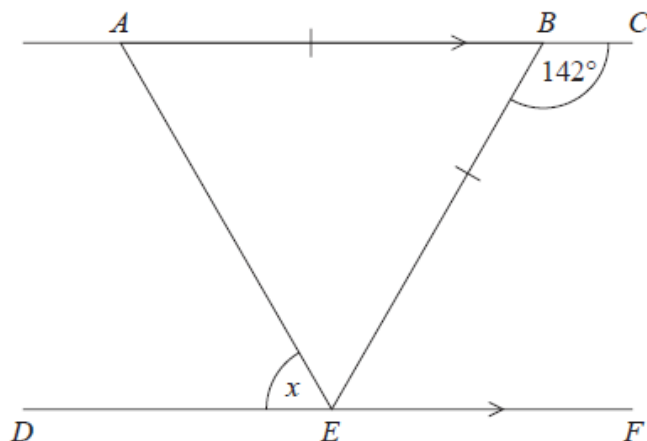
ABC and DEF are parallel lines.

Work out the size of angle x .

Give a reason for each stage of your working.

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

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.

.....^o
 (Total for Question 5 is 5 marks)

TOTAL MARKS FOR PAPER: 21