Write your name here

Surname	Other names

Pearson Edexcel
Level 1/Level 2 GCSE (9–1)

Centre Number	Candidate Number

Mathematics

Angles – Regular polygons

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.

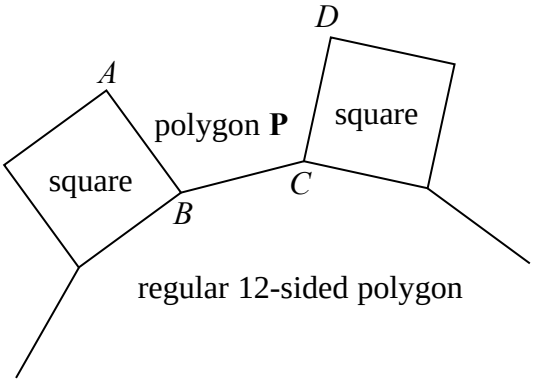
Information

- The total mark for this paper is **18**. 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.

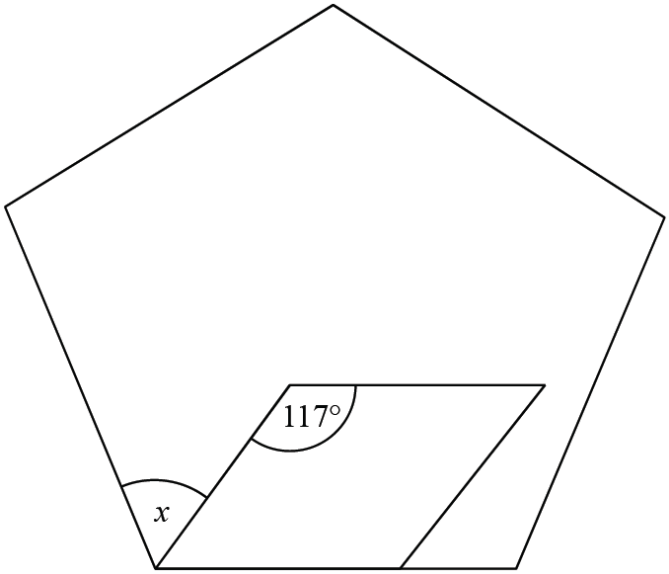
1 In the diagram, *AB*, *BC* and *CD* are three sides of a regular polygon **P**.



Show that polygon **P** is a hexagon.
You must show your working.

(Total for Question 1 is 4 marks)

2 The diagram shows a regular pentagon and a parallelogram.

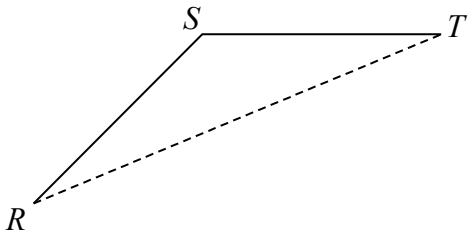


Work out the size of the angle marked x.
You must show all your working.

.....°

(Total for Question 2 is 4 marks)

3



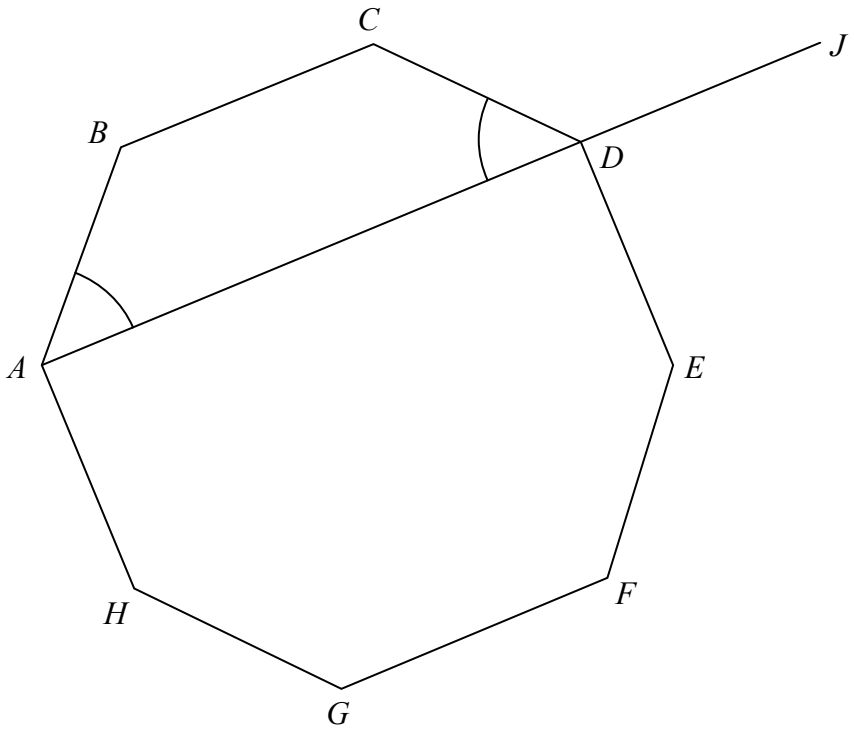
RS and *ST* are 2 sides of a regular 12-sided polygon.
RT is a diagonal of the polygon.

Work out the size of angle *STR*.
You must show your working.

..... °

(Total for Question 3 is 3 marks)

4



1H

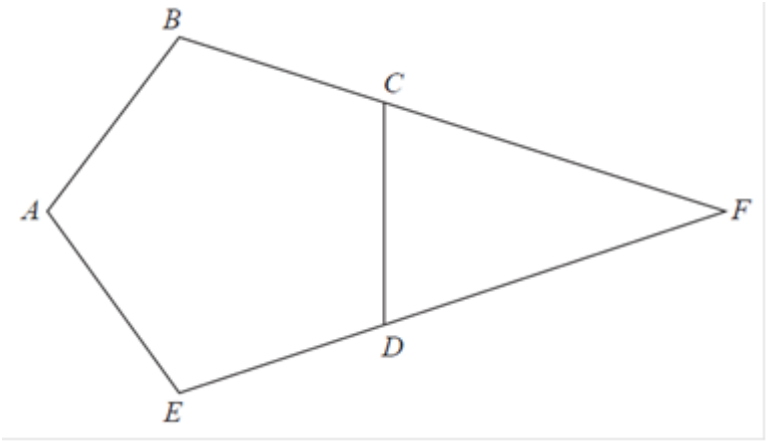
ABCDEFGH is a regular octagon.
ADJ is a straight line.

angle *BAD* = angle *CDA*

Show that angle *CDJ* = 135°

(Total for Question 4 is 4 marks)

5



ABCDE is a regular pentagon.
BCF and *EDF* are straight lines.

Work out the size of angle *CFD*.
You must show how you get your answer.

..... °

(Total for Question 5 is 3 marks)

TOTAL MARKS FOR PAPER: 18