Name:_____

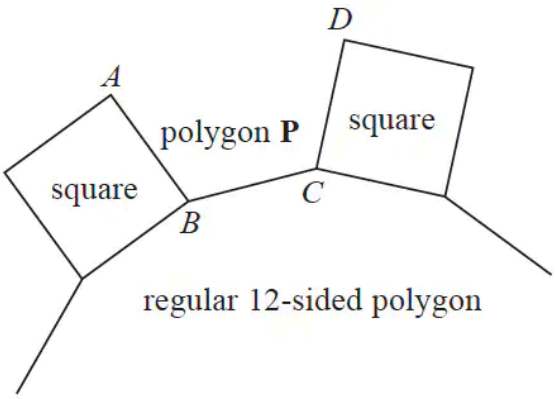
GCSE (1 - 9) Angles in Polygons	Solutions:

These questions are compiled from *released* Pearson Edexcel GCSE maths exam papers
They contain exam questions from up until the ***Summer 2023*** exam series
More recent exam papers do exist but are withheld for mock exams
As new exam papers are released these worksheets will gradually be updated
The ***most current*** version of these worksheets will always be available at: kennethstafford.co.uk

Question	Where the question appeared
1	Edexcel, GCSE, Summer 2017, Paper 3F, Q19
2	Edexcel, GCSE, Summer 2018, Paper 3F, Q26
3	Edexcel, GCSE, Autumn 2018, Paper 1F, Q28
4	Edexcel, GCSE, Summer 2019, Paper 3F, Q28
5	Edexcel, GCSE, Autumn 2019, Paper 3F, Q29
6	Edexcel, GCSE, Autumn 2020, Paper 2F, Q28
7	Edexcel, GCSE, Autumn 2020, Paper 3F, Q11
8	Edexcel, GCSE, Summer 2022, Paper 1F, Q27
9	Edexcel, GCSE, Summer 2022, Paper 2F, Q7

1

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



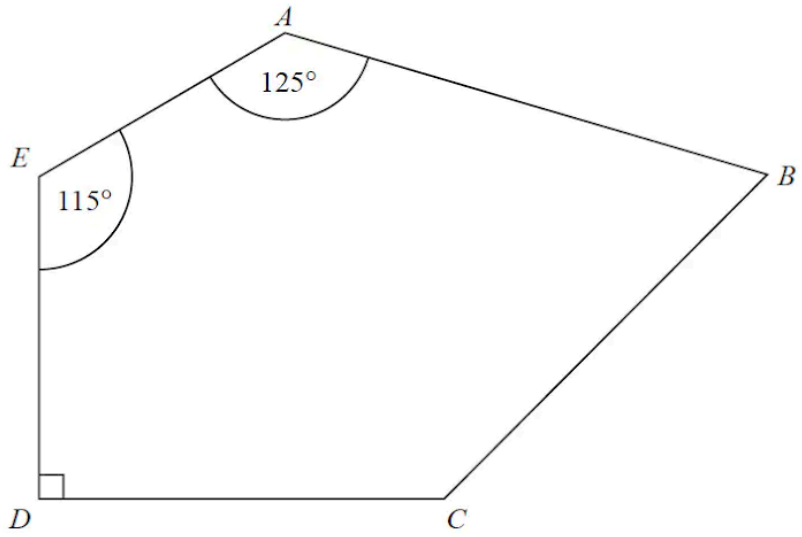
Show that polygon **P** is a hexagon.
You must show your working.

(Total for Question 19 is 4 marks)

[Edexcel, GCSE, Summer 2017, Paper 3F, Q19]

2

ABCDE is a pentagon.



Angle *BCD* = 2 × angle *ABC*

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

.....°

(Total for Question 26 is 5 marks)

[Edexcel, GCSE, Summer 2018, Paper 3F, Q26]

3

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.

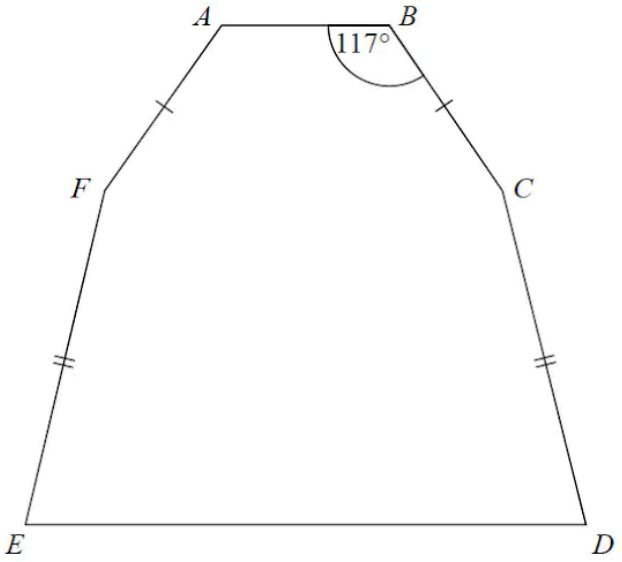
.....

(Total for Question 28 is 3 marks)

[Edexcel, GCSE, Autumn 2018, Paper 1F, Q28]

4

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



$FA = BC$
$EF = CD$
Angle $ABC = 117°$

Angle $BCD = 2 \times$ angle CDE

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

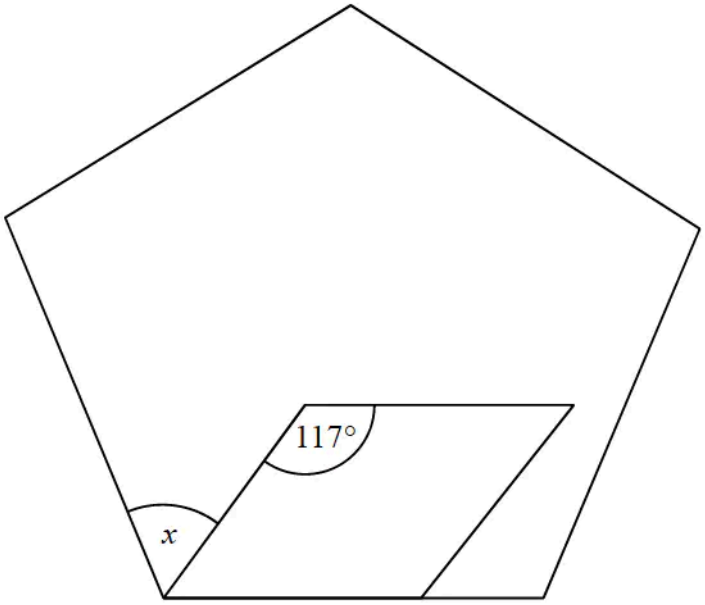
.....°

(Total for Question 28 is 4 marks)

[Edexcel, GCSE, Summer 2019, Paper 3F, Q28]

5

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 29 is 4 marks)

[Edexcel, GCSE, Autumn 2019, Paper 3F, Q29]

6

Each exterior angle of a regular polygon is 15°

Work out the number of sides of the polygon.

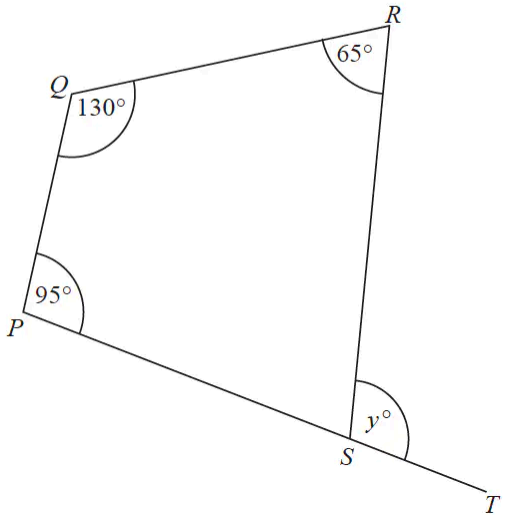
.....

(Total for Question 28 is 2 marks)

[Edexcel, GCSE, Autumn 2020, Paper 2F, Q28]

7

PQRS is a quadrilateral.
PST is a straight line.



Find the value of y.

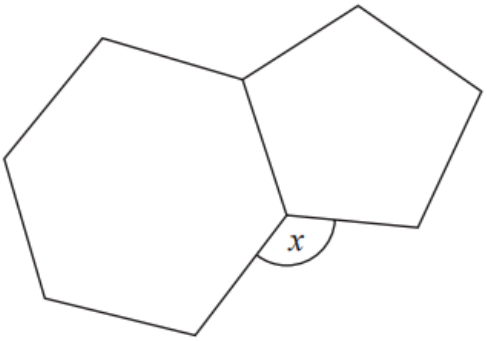
y = ...

(Total for Question 11 is 3 marks)

[Edexcel, GCSE, Autumn 2020, Paper 3F, Q11]

8

Here is a regular hexagon and a regular pentagon.



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

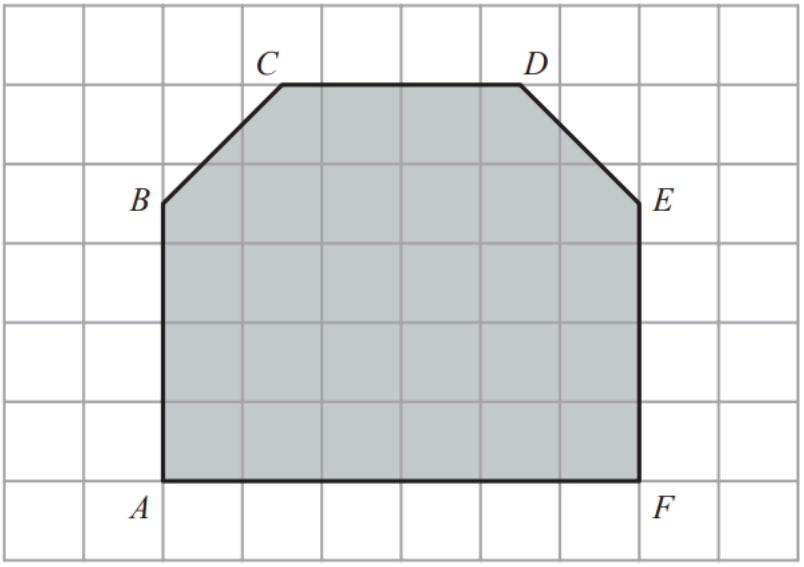
.....°

(Total for Question 5 is 3 marks)

[Edexcel, GCSE, Summer 2022, Paper 1F, Q27]

9

Here is polygon $ABCDEF$ on a square grid.



(a) Write down the mathematical name of the polygon.

.....

(1)

(b) Which side of the polygon is parallel to the side CD?

.....

(1)

(c) Write down a side of the polygon that is perpendicular to the side AF.

.....

(1)

(Total for Question 7 is 3 marks)

[Edexcel, GCSE, Summer 2022, Paper 2F, Q7]