Angles (Questions from Past Papers)

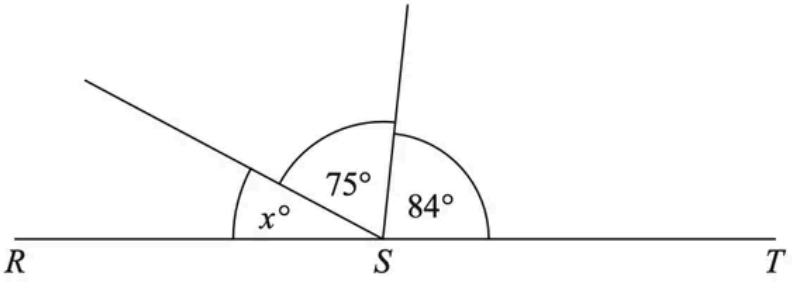
Name: _____

GCSE (1 - 9) Angles	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	Question	Where the question appeared
1	Edexcel, GCSE, Autumn 2021, Paper 2F, Q13	17	Edexcel, GCSE, Summer 2017, Paper 3F, Q13
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13	Edexcel, GCSE, Summer 2018, Paper 2F, Q15		
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16	Edexcel, GCSE, Summer 2017, Paper 2F, Q9		

1



RST is a straight line.

(i) Work out the value of x.

.....

(2)

(ii) Give a reason for your answer.

.....

.....

.....

(1)

(Total for Question 13 is 3 marks)

[Edexcel, GCSE, Autumn 2021, Paper 2F, Q13]

2

Jenna measures all the angles around a point.

Her results are 23°, 145°, 23° and 69°

Explain why these results cannot be true.

.....

.....

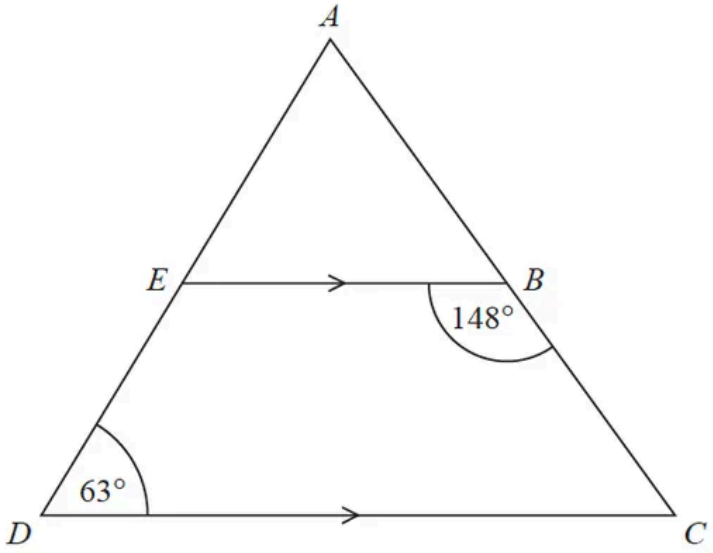
.....

(Total for Question 15 is 1 mark)

[Edexcel, GCSE, Autumn 2021, Paper 3F, Q15]

3

ADC is a triangle.



AED and *ABC* are straight lines.
EB is parallel to *DC*.

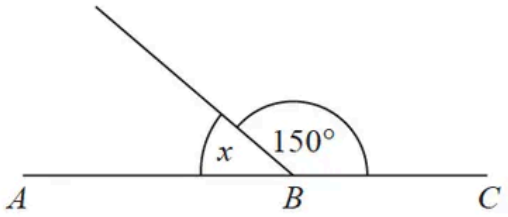
Angle *EBC* = 148°
Angle *ADC* = 63°

Work out the size of angle *EAB*.
You must give a reason for each stage of your working.

(Total for Question 25 is 5 marks)

[Edexcel, GCSE, Autumn 2020, Paper 1F, Q25]

4



ABC is a straight line.

(a) (i) Work out the size of the angle marked x.

.....°

(1)

(ii) Give a reason for your answer.

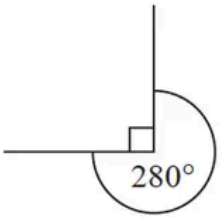
.....

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(1)

The diagram below is wrong.



(b) Explain why.

.....

.....

.....

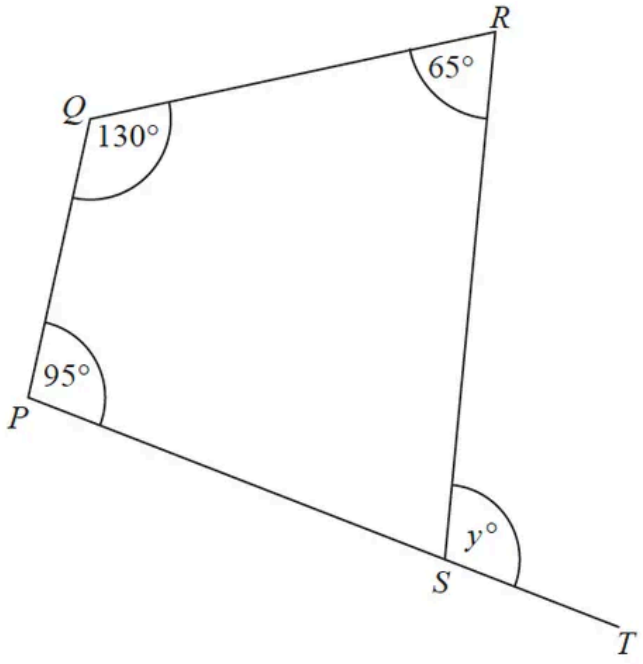
(1)

(Total for Question 8 is 3 marks)

[Edexcel, GCSE, Autumn 2020, Paper 2F, Q8]

5

PQRS is a quadrilateral.
PST is a straight line.



Find the value of y.

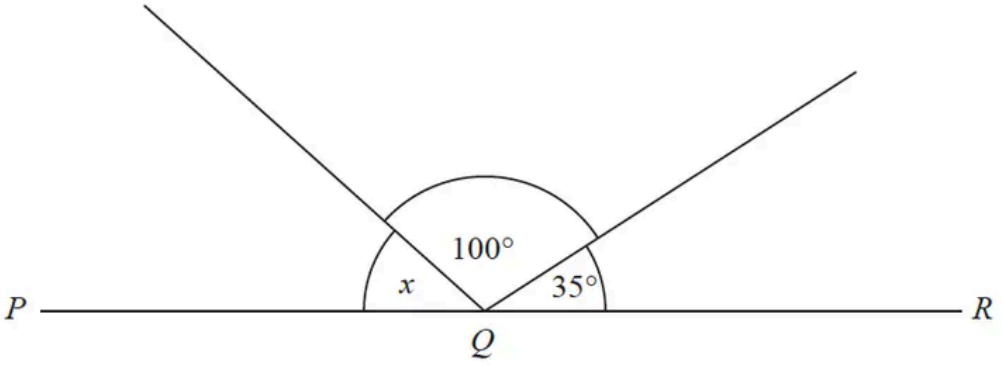
$y =$ .....

(Total for Question 11 is 3 marks)

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

6

PQR is a straight line.



Work out the size of angle x.

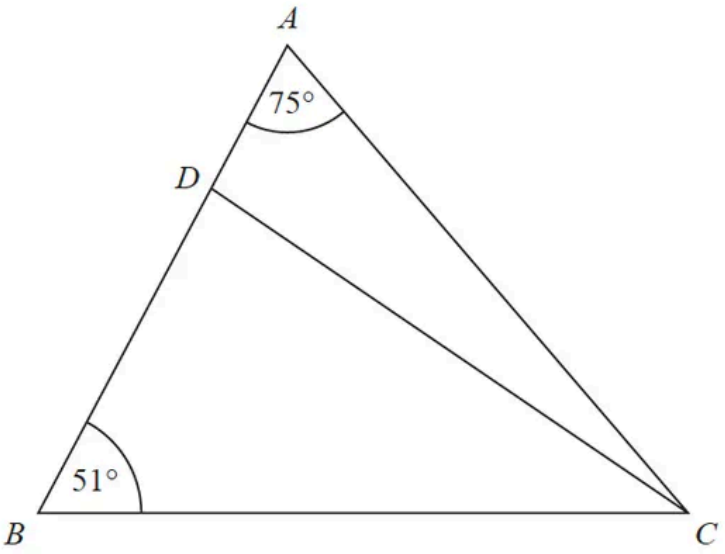
.....°

(Total for Question 9 is 2 marks)

[Edexcel, GCSE, Autumn 2019, Paper 1F, Q9]

7

The diagram shows triangle ABC.



ADB is a straight line.

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

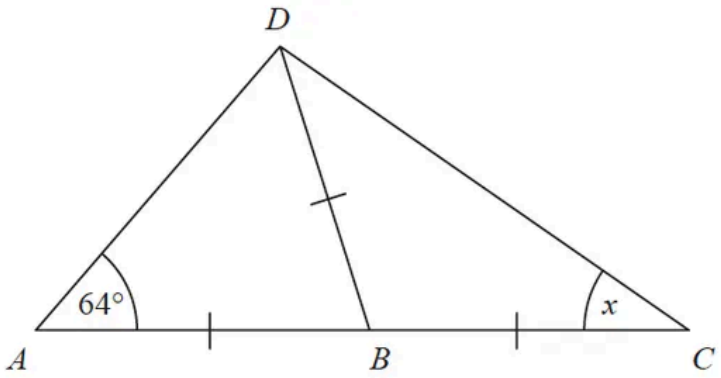
Work out the size of angle BDC.

.....°

(Total for Question 24 is 4 marks)

[Edexcel, GCSE, Autumn 2019, Paper 1F, Q24]

8



ABC is a straight line.
$AB = BC = BD$.
Angle $DAB = 64°$

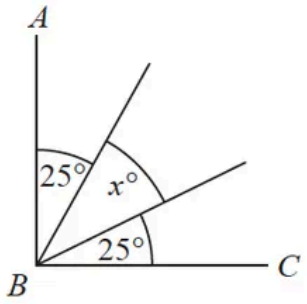
Work out the size of the angle marked x.
Give a reason for each stage of your working.

(Total for Question 17 is 4 marks)

[Edexcel, GCSE, Autumn 2019, Paper 2F, Q17]

9

AB and BC are perpendicular lines.

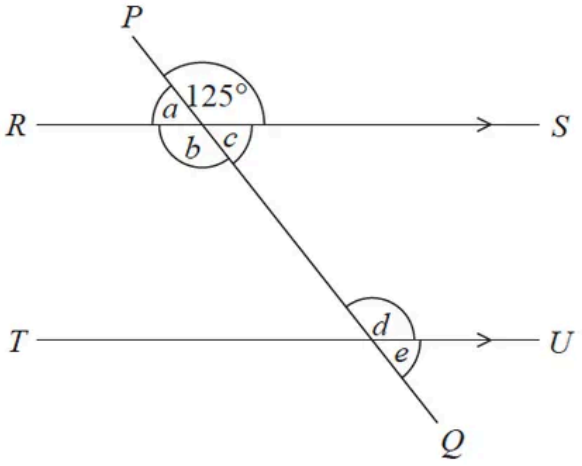


(a) Find the value of x.

$x =$ .....

(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 $a + b + c = 235°$

.....

.....

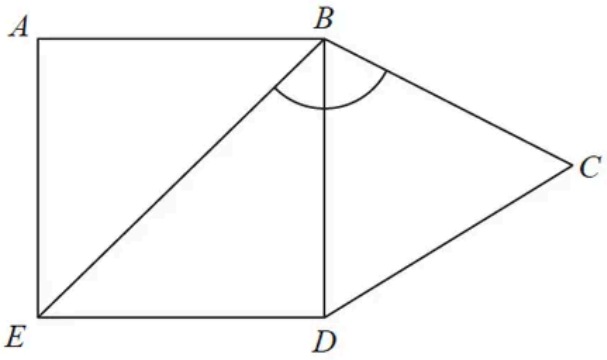
(1)

(Total for Question 12 is 5 marks)

[Edexcel, GCSE, Summer 2019, Paper 1F, Q12]

10

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



Work out the size of angle EBC.

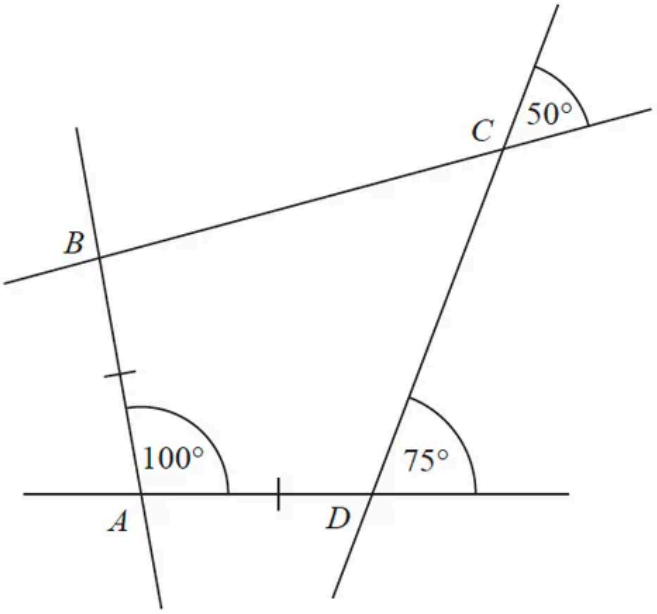
.....°

(Total for Question 20 is 2 marks)

[Edexcel, GCSE, Summer 2019, Paper 3F, Q20]

11

The diagram shows quadrilateral $ABCD$ with each of its sides extended.



$AB = AD$

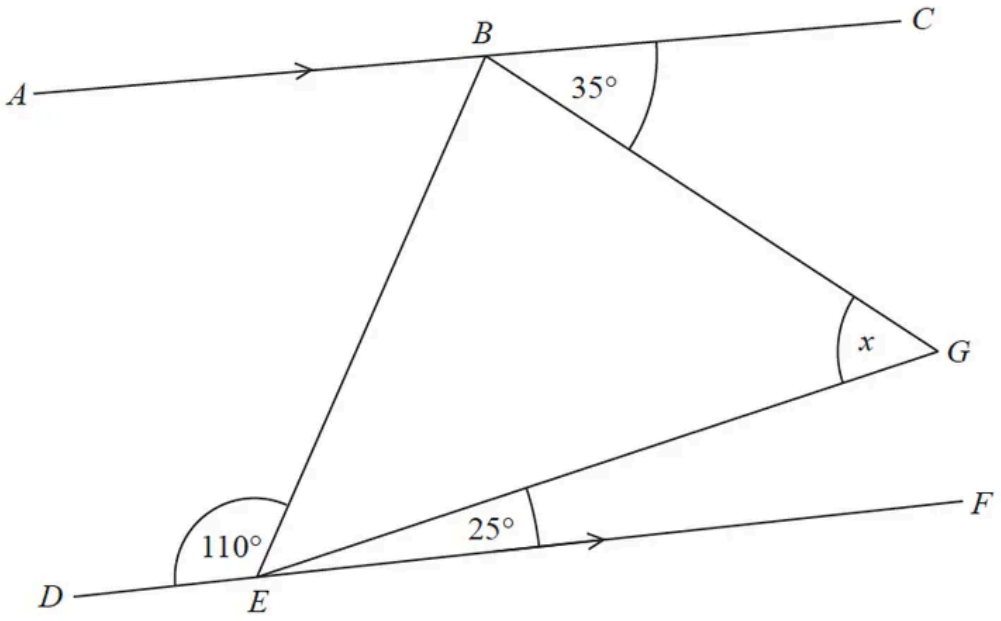
Show that $ABCD$ is a kite.
Give a reason for each stage of your working.

(Total for Question 14 is 4 marks)

[Edexcel, GCSE, Autumn 2018, Paper 1F, Q14]

12

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.

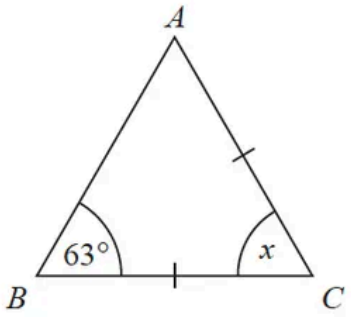
.....°

(Total for Question 22 is 4 marks)

[Edexcel, GCSE, Autumn 2018, Paper 2F, Q22]

13

Mary needs to work out the size of angle x in this diagram.



She writes

$x = 63°$ because base angles of an isosceles triangle are equal.

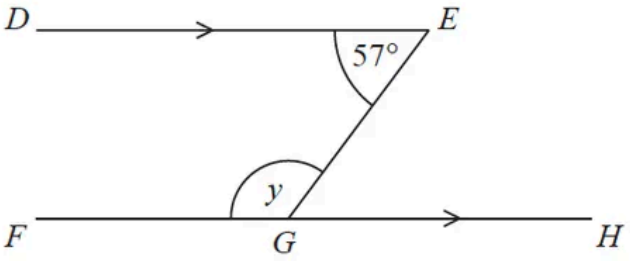
Mary is wrong.

(a) Explain why.

.....

(1)

William needs to work out the size of angle y in this diagram.



William writes

Working	**Reason**
angle $EGH = 57°$	because corresponding angles are equal
$y = 180° - 57°$ $y = 123°$	because angles on a straight line add up to 180°

One of William's reasons is wrong.

(b) Write down the correct reason.

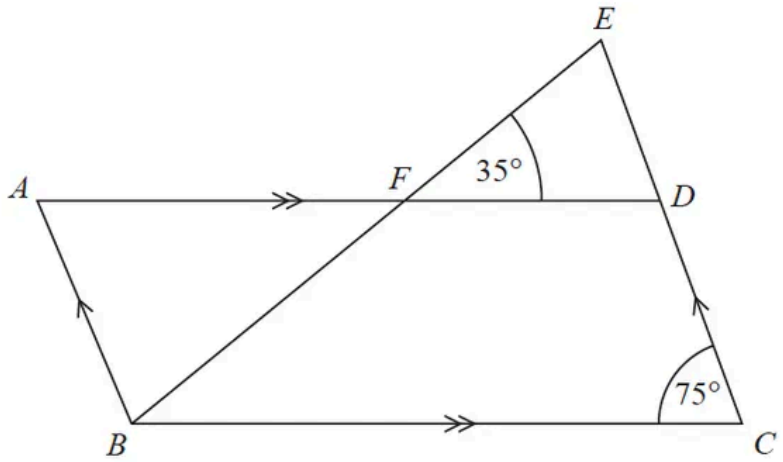
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(1)

(Total for Question 15 is 2 marks)

[Edexcel, GCSE, Summer 2018, Paper 2F, Q15]

14



ABCD is a parallelogram.
EDC is a straight line.
F is the point on *AD* so that *BFE* is a straight line.

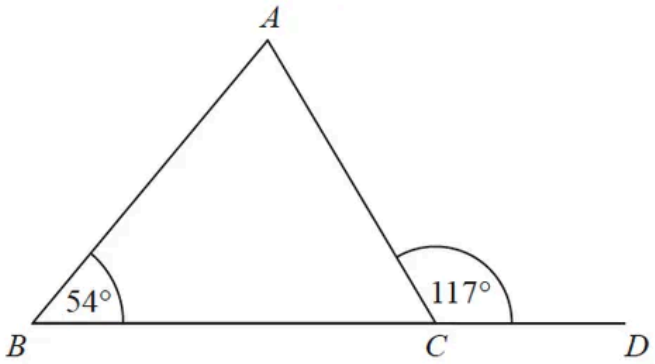
Angle *EFD* = 35°
Angle *DCB* = 75°

Show that angle *ABF* = 70°
Give a reason for each stage of your working.

(Total for Question 25 is 4 marks)

[Edexcel, GCSE, Autumn 2017, Paper 1F, Q25]

15



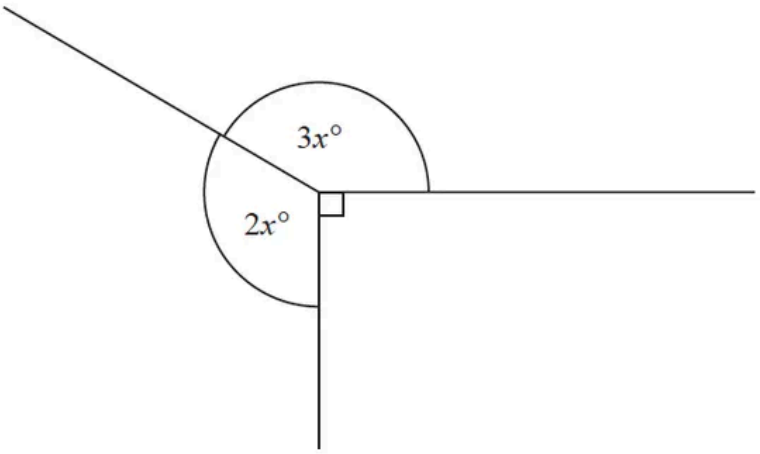
BCD is a straight line.
ABC is a triangle.

Show that triangle *ABC* is an isosceles triangle.
Give a reason for each stage of your working.

(Total for Question 7 is 4 marks)

[Edexcel, GCSE, Autumn 2017, Paper 3F, Q7]

16



Find the value of x.

.....

(Total for Question 9 is 3 marks)

[Edexcel, GCSE, Summer 2017, Paper 2F, Q9]

17

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.

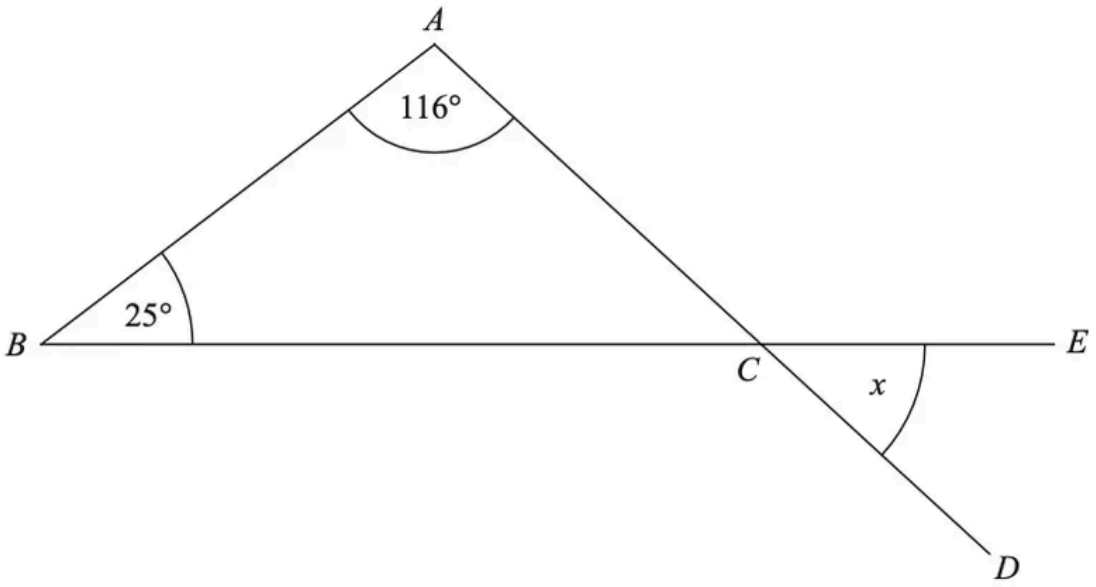
..... ° , ... ° , ... °

(Total for Question 13 is 5 marks)

[Edexcel, GCSE, Summer 2017, Paper 3F, Q13]

18

The diagram shows a triangle ABC.



ACD and BCE are straight lines.

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

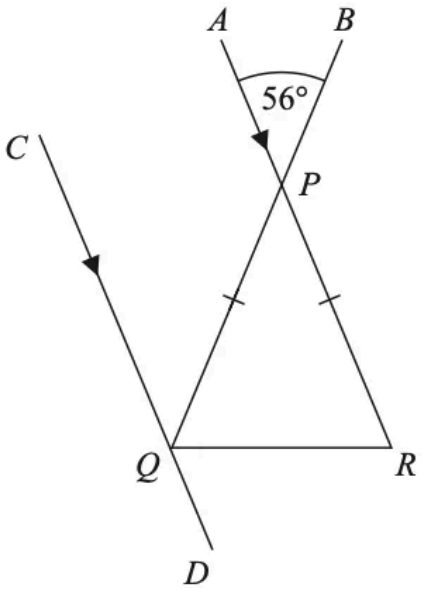
.....°

(Total for Question 11 is 3 marks)

[Edexcel, GCSE, Autumn 2022, Paper 2F, Q11]

19

In the diagram, PQR is an isosceles triangle with $PQ = PR$.



APR and CQD are parallel lines.
BPQ is a straight line.

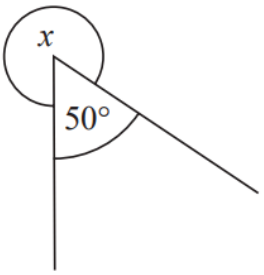
Angle $APB = 56°$

Work out the size of angle CQR.
Give a reason for each stage of your working.

(Total for Question 20 is 5 marks)

[Edexcel, GCSE, Autumn 2022, Paper 3F, Q20]

20



(a) Work out the size of the angle marked x.

.....°

(2)

A student says that an angle of 50° is an obtuse angle.

The student is wrong.

(b) Explain why.

.....

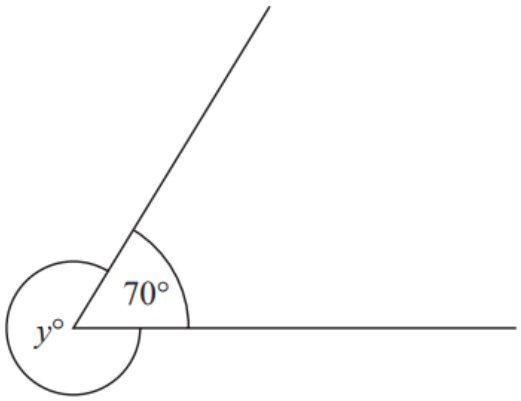
.....

(1)

(Total for Question 8 is 3 marks)

[Edexcel, GCSE, Summer 2023, Paper 1F, Q8]

21



(a) Find the value of y.

$y =$ .....

(1)

(b) Give a reason for your answer.

.....

.....

.....

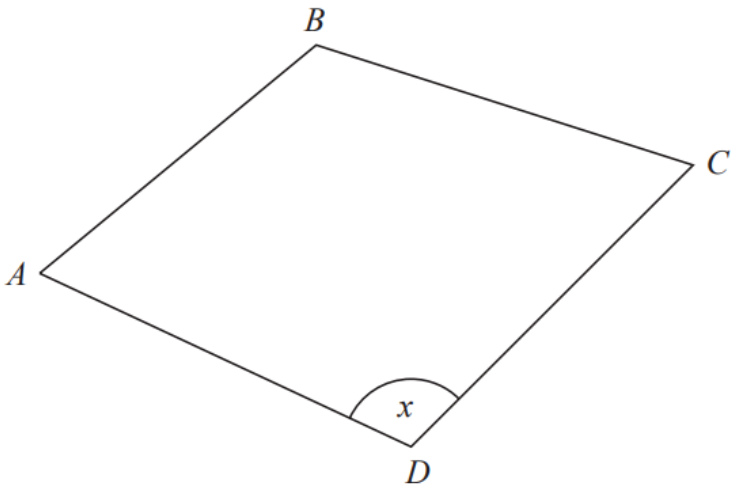
(1)

(Total for Question 9 is 2 marks)

[Edexcel, GCSE, November 2022, Paper 1F, Q9]

22

Here is a quadrilateral $ABCD$.



(a) Measure the length of the side AB.
Give your answer in centimetres.

..... centimetres
(1)

(b) Measure the size of the angle marked x.

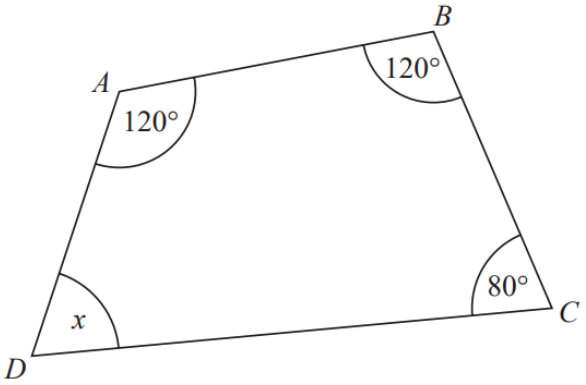
.....°
(1)

(Total for Question 6 is 2 marks)

[Edexcel, GCSE, November 2022, Paper 2F, Q6]

23

ABCD is a quadrilateral.



(a) (i) Work out the size of angle x.

.....°

(1)

(ii) Give a reason for your answer.

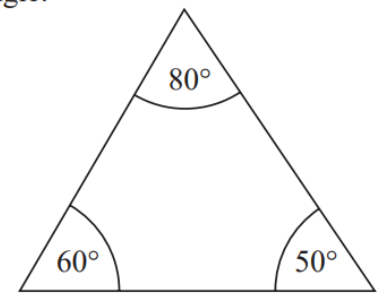
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(1)

The diagram below shows a triangle.



The diagram is wrong.

(b) Explain why.

.....

.....

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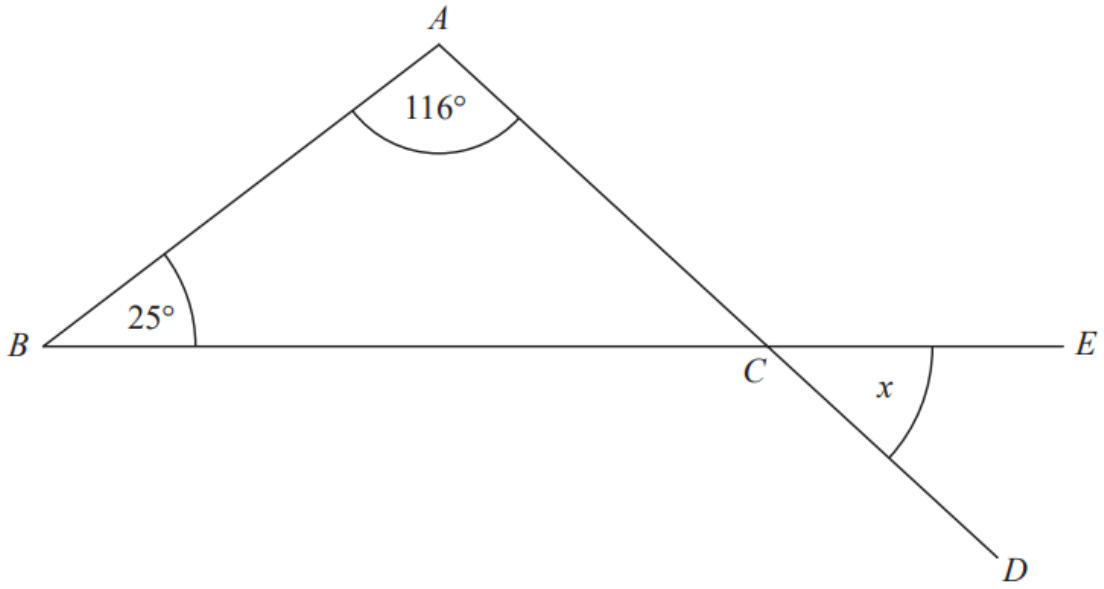
(1)

(Total for Question 13 is 3 marks)

[Edexcel, GCSE, November 2022, Paper 2F, Q13]

24

The diagram shows a triangle ABC.



ACD and BCE are straight lines.

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

.....°

(Total for Question 11 is 3 marks)

[Edexcel, GCSE, Summer 2022, Paper 2F, Q11]