Name:_____

GCSE (1 - 9) Area of any Triangle	Solutions:

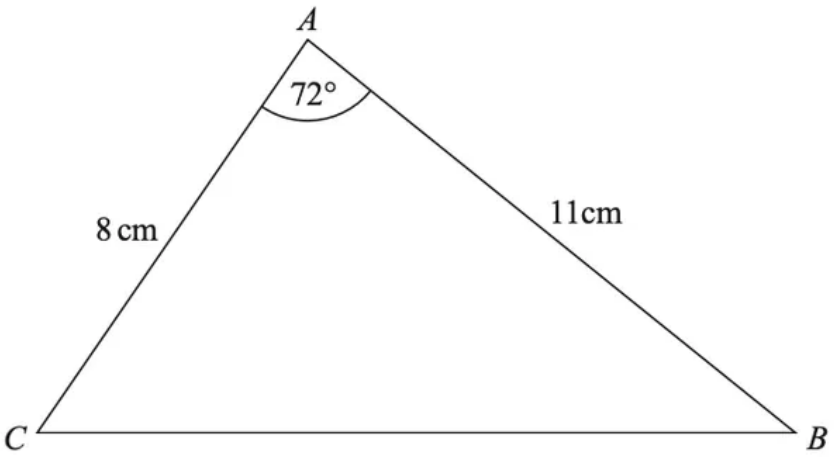
These questions are compiled from *released* Pearson Edexcel GCSE maths exam papers
They contain exam questions from up until the ***November 2021*** exam series
More recent exam papers do exist but are withheld for mock exams
As new exam papers are released these worksheets will gradually be updated
The ***most current*** version of these worksheets will always be available at: kennethstafford.co.uk
These worksheets were made using examq.co.uk

Question	Where the question appeared
1	Edexcel, GCSE, Autumn 2021, Paper 2H, Q15
2	Edexcel, GCSE, Autumn 2021, Paper 3H, Q23
3	Edexcel, GCSE, Autumn 2020, Paper 3H, Q19
4	Edexcel, GCSE, Autumn 2019, Paper 2H, Q23
5	Edexcel, GCSE, Summer 2019, Paper 3H, Q14
6	Edexcel, GCSE, Autumn 2018, Paper 2H, Q13
7	Edexcel, GCSE, Autumn 2017, Paper 3H, Q17
8	Edexcel, GCSE, Summer 2017, Paper 2H, Q17
9	Edexcel, GCSE, Summer 2017, Paper 3H, Q15

Area of any Triangle (Questions from Past Papers)

1

Here is triangle ABC.



(a) Find the length of BC.
Give your answer correct to 3 significant figures.

..... cm

(3)

(b) Find the area of triangle ABC.
Give your answer correct to 3 significant figures.

..... cm^2

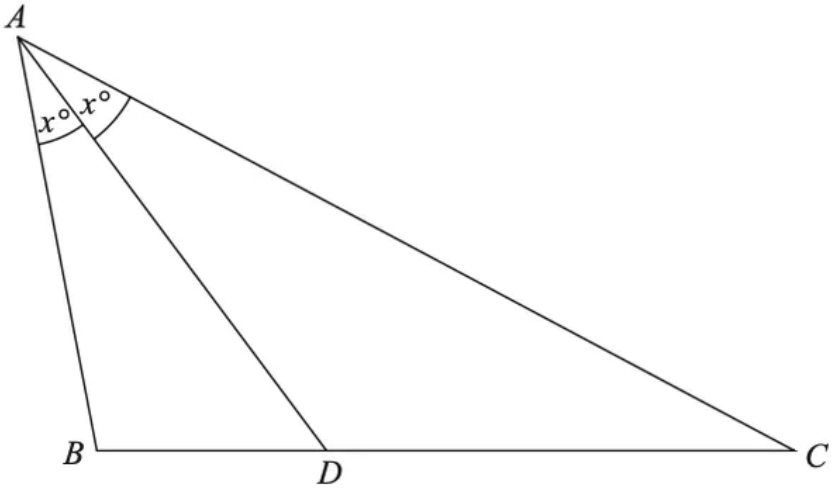
(2)

(Total for Question 15 is 5 marks)

[Edexcel, GCSE, Autumn 2021, Paper 2H, Q15]

2

ABC is a triangle.



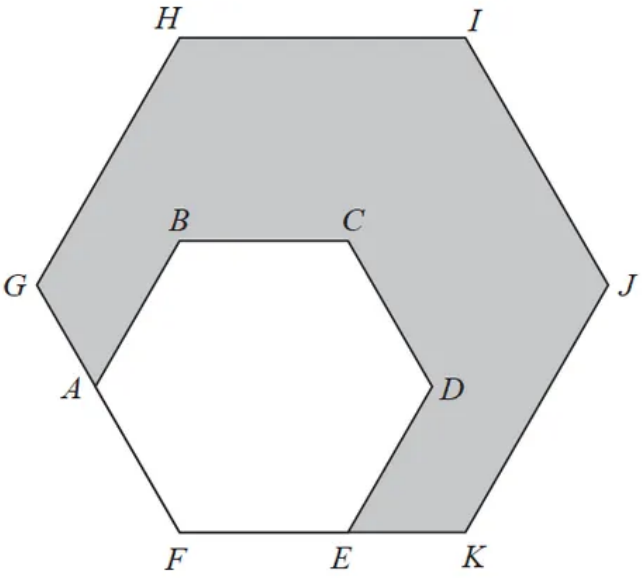
D is the point on BC such that angle BAD = angle $DAC = x°$

Prove that $\frac{AB}{BD} = \frac{AC}{DC}$

(Total for Question 23 is 4 marks)

[Edexcel, GCSE, Autumn 2021, Paper 3H, Q23]

3



ABCDEF is a regular hexagon with sides of length x.
This hexagon is enlarged, centre F, by scale factor p to give hexagon *FGHIJK*.

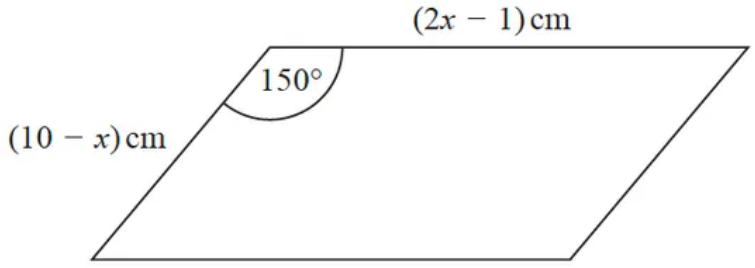
Show that the area of the shaded region in the diagram is given by $\frac{3\sqrt{3}}{2}(p^2 - 1)x^2$

(Total for Question 19 is 4 marks)

[Edexcel, GCSE, Autumn 2020, Paper 3H, Q19]

4

The diagram shows a parallelogram.



The area of the parallelogram is greater than 15 cm^2

(a) Show that $2x^2 - 21x + 40 < 0$

(3)

(b) Find the range of possible values of x.

.....

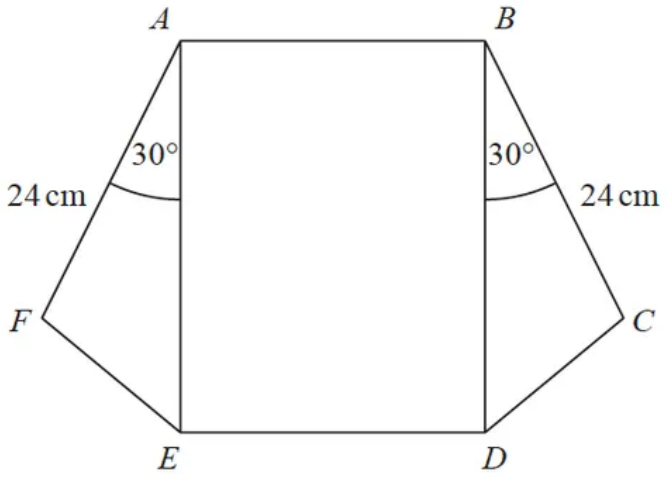
(3)

(Total for Question 23 is 6 marks)

[Edexcel, GCSE, Autumn 2019, Paper 2H, Q23]

5

The diagram shows a rectangle, $ABDE$, and two congruent triangles, AFE and BCD.



area of rectangle $ABDE$ = area of triangle AFE + area of triangle BCD

$$AB : AE = 1 : 3$$

Work out the length of AE.

..... cm

(Total for Question 14 is 4 marks)

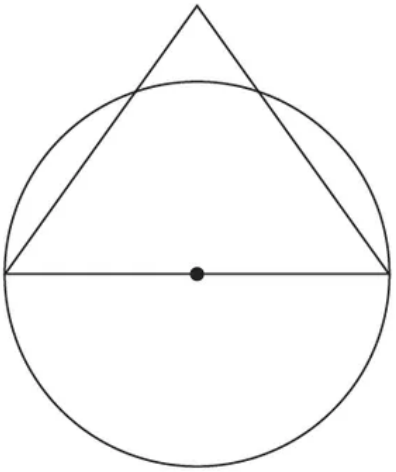
[Edexcel, GCSE, Summer 2019, Paper 3H, Q14]

6

The diagram shows a circle and an equilateral triangle.

One side of the equilateral triangle is a diameter of the circle.
The circle has a circumference of 44 cm.

Work out the area of the triangle.
Give your answer correct to 3 significant figures.



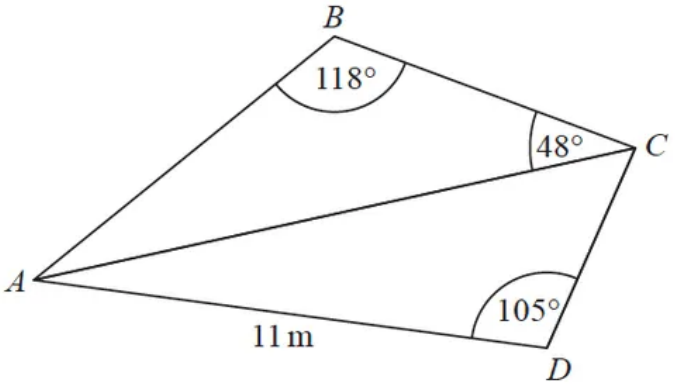
..... cm^2

(Total for Question 13 is 3 marks)

[Edexcel, GCSE, Autumn 2018, Paper 2H, Q13]

7

ABC and *ADC* are triangles.



The area of triangle *ADC* is 56 m^2

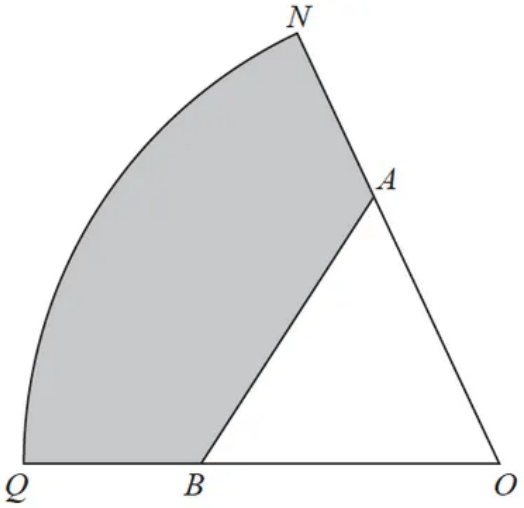
Work out the length of *AB*.
Give your answer correct to 1 decimal place.

..... m

(Total for Question 17 is 5 marks)

[Edexcel, GCSE, Autumn 2017, Paper 3H, Q17]

8



ONQ is a sector of a circle with centre O and radius 11 cm.

A is the point on ON and B is the point on OQ such that AOB is an equilateral triangle of side 7 cm.

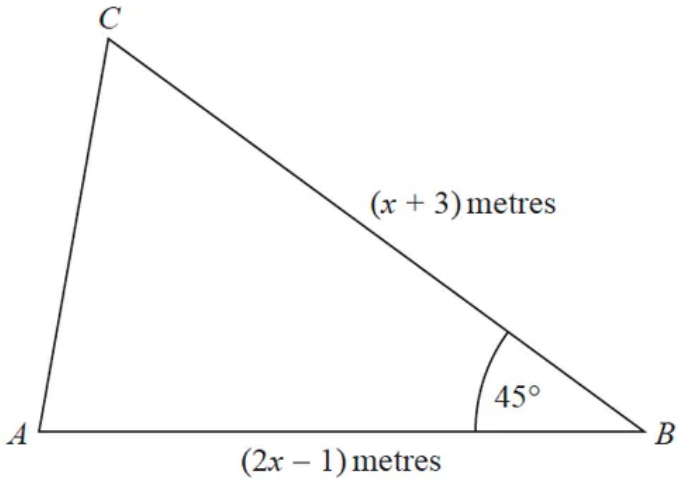
Calculate the area of the shaded region as a percentage of the area of the sector ONQ.
Give your answer correct to 1 decimal place.

.....%

(Total for Question 17 is 5 marks)

[Edexcel, GCSE, Summer 2017, Paper 2H, Q17]

9



The area of triangle ABC is $6\sqrt{2}$ m^2.

Calculate the value of x.
Give your answer correct to 3 significant figures.

.....

(Total for Question 15 is 5 marks)

[Edexcel, GCSE, Summer 2017, Paper 3H, Q15]