

## AREA OF TRIANGLE

Pearson Edexcel - Thursday 8 November 2018 - Paper 2 (Calculator) Higher Tier

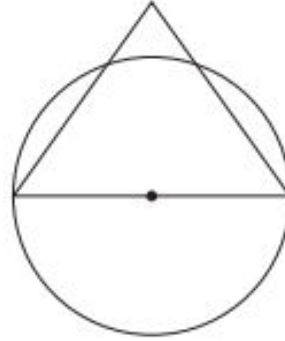
1.

13 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<sup>2</sup>

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(Total for Question 13 is 3 marks)

Pearson Edexcel - Thursday 24 May 2018 - Paper 1 (Non-Calculator) Higher Tier

2.

- 8 The perimeter of a right-angled triangle is 72 cm.  
The lengths of its sides are in the ratio 3 : 4 : 5

Work out the area of the triangle.

.....cm<sup>2</sup>

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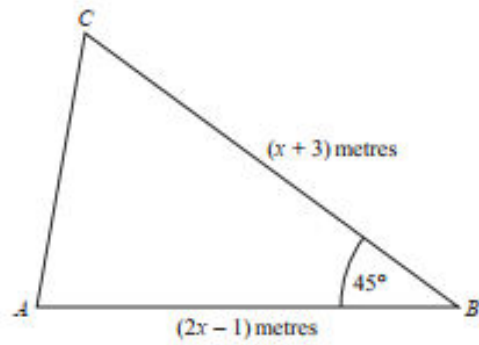
(Total for Question 8 is 4 marks)

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Pearson Edexcel - Tuesday 13 June 2017 - Paper 3 (Calculator) Higher Tier

3.

15



The area of triangle  $ABC$  is  $6\sqrt{2}$  m<sup>2</sup>.

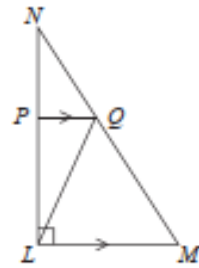
Calculate the value of  $x$ .

Give your answer correct to 3 significant figures.

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(Total for Question 15 is 5 marks)

18 LMN is a right-angled triangle.



Angle  $NLM = 90^\circ$   
 $PQ$  is parallel to  $LM$ .

The area of triangle  $PNQ$  is  $8 \text{ cm}^2$   
The area of triangle  $LPQ$  is  $16 \text{ cm}^2$

Work out the area of triangle  $LQM$ .

.....  $\text{cm}^2$

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(Total for Question 18 is 4 marks)

Pearson Edexcel - Specimen Papers Set 2 - Paper 1 (Non-Calculator) Higher Tier

5.

22 The line  $l$  is a tangent to the circle  $x^2 + y^2 = 40$  at the point  $A$ .  
 $A$  is the point  $(2, 6)$ .

The line  $l$  crosses the  $x$ -axis at the point  $P$ .

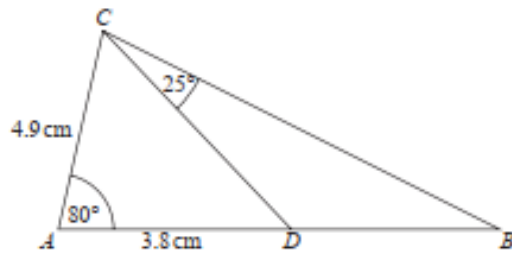
Work out the area of triangle  $OAP$ .

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(Total for Question 22 is 5 marks)

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21



$ABC$  is a triangle.  
 $D$  is a point on  $AB$ .

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

.....  $\text{cm}^2$

(Total for Question 21 is 5 marks)

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21 In triangle  $RPQ$ ,

$$RP = 8.7 \text{ cm}$$

$$PQ = 5.2 \text{ cm}$$

$$\text{Angle } PRQ = 32^\circ$$

- (a) Assuming that angle  $PQR$  is an acute angle, calculate the area of triangle  $RPQ$ .  
Give your answer correct to 3 significant figures.

.....cm<sup>2</sup>

(4)

- (b) If you did not know that angle  $PQR$  is an acute angle, what effect would this have on your calculation of the area of triangle  $RPQ$ ?

.....

.....

.....

(1)

**(Total for Question 21 is 5 marks)**

18  $ABC$  is an isosceles triangle.

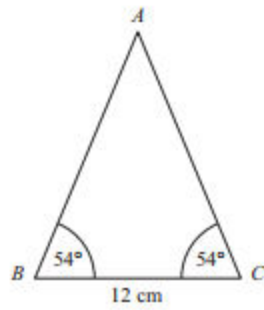


Diagram NOT  
accurately drawn

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

..... cm<sup>2</sup>

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(Total for Question 18 is 4 marks)



20

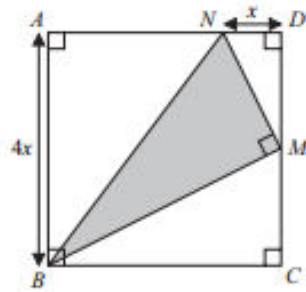


Diagram NOT  
accurately drawn

$ABCD$  is a square with a side length of  $4x$

$M$  is the midpoint of  $DC$ .

$N$  is the point on  $AD$  where  $ND = x$

$BMN$  is a right-angled triangle.

Find an expression, in terms of  $x$ , for the area of triangle  $BMN$ .

Give your expression in its simplest form.

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(Total for Question 20 is 4 marks)

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24  $ABC$  is a triangle.

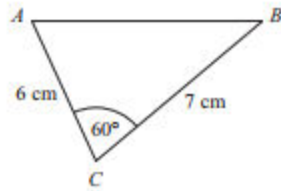


Diagram NOT  
accurately drawn

- (a) Work out the area of triangle  $ABC$ .  
Give your answer correct to 3 significant figures.

..... cm<sup>2</sup>  
(2)

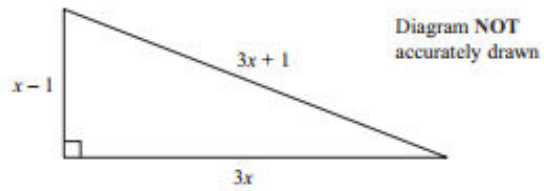
- (b) Work out the length of the side  $AB$ .  
Give your answer correct to 3 significant figures.

..... cm  
(3)

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(Total for Question 24 is 5 marks)

16 The diagram shows a triangle.



In the diagram, all the measurements are in metres.

The perimeter of the triangle is 56 m.

The area of the triangle is  $A \text{ m}^2$ .

Work out the value of  $A$ .

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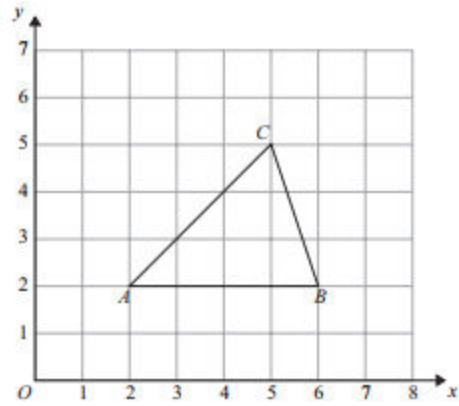
(Total for Question 16 is 4 marks)

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Pearson Edexcel - Monday 11 June 2012 - Paper 1 (Non-Calculator) Higher Tier

12.

18



Triangle  $ABC$  is drawn on a centimetre grid.

$A$  is the point  $(2, 2)$ .

$B$  is the point  $(6, 2)$ .

$C$  is the point  $(5, 5)$ .

Triangle  $PQR$  is an enlargement of triangle  $ABC$  with scale factor  $\frac{1}{2}$  and centre  $(0, 0)$ .

Work out the area of triangle  $PQR$ .

.....  $\text{cm}^2$

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(Total for Question 18 is 3 marks)

Pearson Edexcel - Wednesday 13 June 2012 - Paper 2 (Calculator) Higher Tier

13.

24

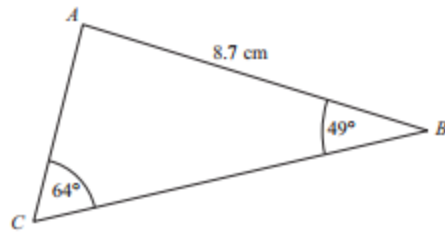


Diagram NOT  
accurately drawn

$ABC$  is a triangle.

$AB = 8.7$  cm.

Angle  $ABC = 49^\circ$ .

Angle  $ACB = 64^\circ$ .

Calculate the area of triangle  $ABC$ .

Give your answer correct to 3 significant figures.

.....cm<sup>2</sup>

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(Total for Question 24 is 5 marks)

1.

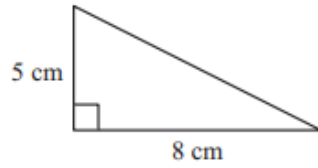


Diagram **NOT**  
accurately drawn

Work out the area of this right-angled triangle.

..... cm<sup>2</sup>  
**(Total 2 marks)**

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15.

28.

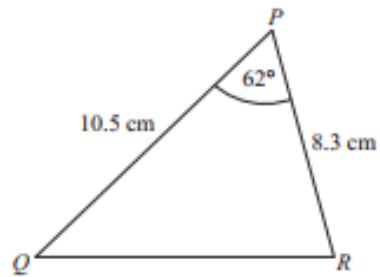


Diagram NOT  
accurately drawn

In triangle  $PQR$ ,

$PQ = 10.5$  cm,

$PR = 8.3$  cm.

angle  $QPR = 62^\circ$ .

- (a) Calculate the area of triangle  $PQR$ .  
Give your answer correct to 3 significant figures.

.....cm<sup>2</sup>  
(2)

- (b) Calculate the length of  $QR$ .  
Give your answer correct to 3 significant figures.

.....cm  
(3)

**(Total 5 marks)**

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12.

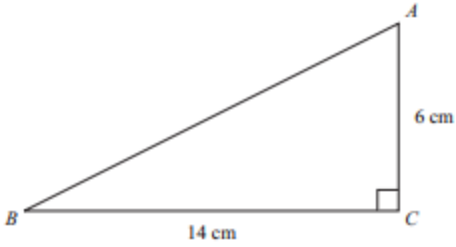


Diagram **NOT**  
accurately drawn

$ABC$  is a right-angled triangle.  
 $AC = 6$  cm.  
 $BC = 14$  cm.

(a) Work out the area of triangle  $ABC$ .

.....  $\text{cm}^2$   
(2)

(b) Calculate the length of  $AB$ .  
Give your answer correct to 2 decimal places.

..... cm  
(3)

(Total 5 marks)

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17.



26.

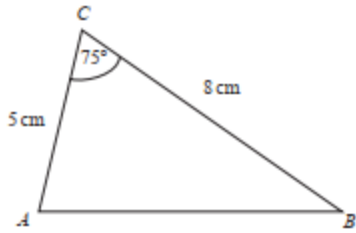


Diagram **NOT**  
accurately drawn

In triangle  $ABC$ ,

$AC = 5$  cm.

$BC = 8$  cm.

Angle  $ACB = 75^\circ$ .

- (a) Calculate the area of triangle  $ABC$ .  
Give your answer correct to 3 significant figures.

.....  $\text{cm}^2$   
(2)

- (b) Calculate the length of  $AB$ .  
Give your answer correct to 3 significant figures.

..... cm  
(3)

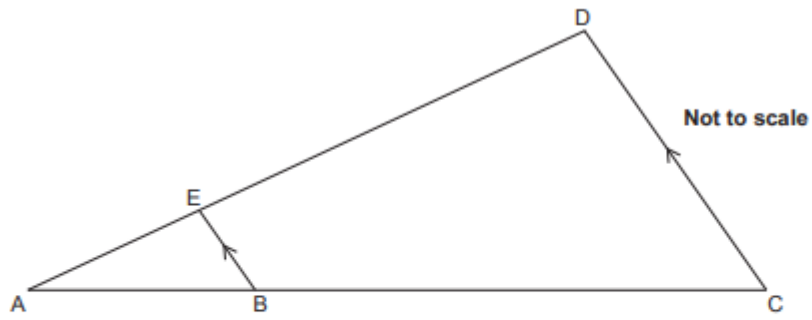
(Total 5 marks)

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OCR GCSE – Monday 9 November 2020 – Paper 6 (Calculator) Higher Tier

18.

13 In the diagram, AED and ABC are straight lines and BE is parallel to CD.



The ratio of length AB to length BC is 2 : 3.  
Triangle ABE has an area of  $8\text{cm}^2$ .

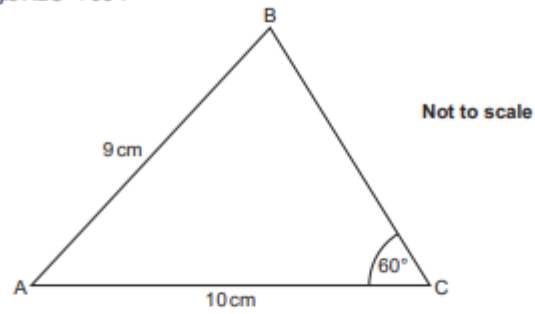
Work out the area of triangle ACD.

.....  $\text{cm}^2$  [4]

19.

19 In this triangle:

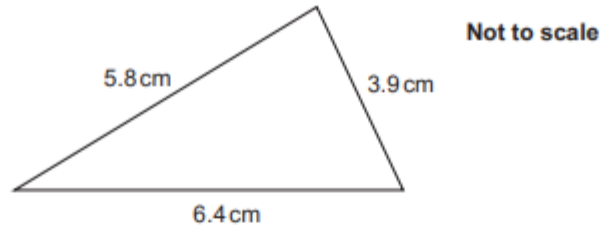
- $AB = 9\text{ cm}$
- $AC = 10\text{ cm}$
- $BC > 5\text{ cm}$
- angle  $BCA = 60^\circ$
- angle  $ABC < 90^\circ$ .



Calculate the area of triangle ABC.

20.

18 Calculate the area of this triangle.



..... cm<sup>2</sup> [6]