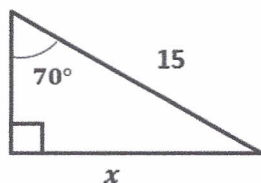


GCSE Trigonometry of Right-Angled Triangles

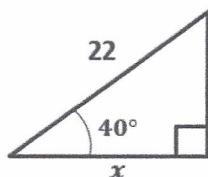
Exercise 1

1. Determine the value of x , giving your answers to 3 significant figures.

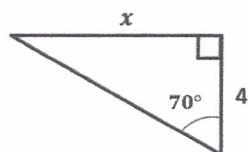
a.



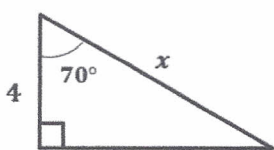
b.



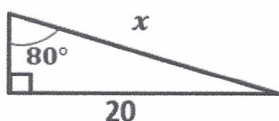
c.



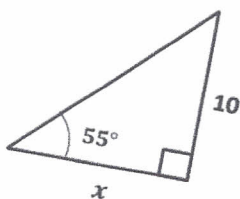
d.



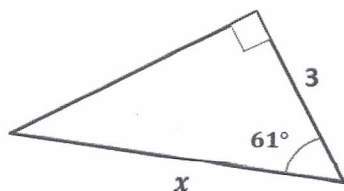
e.



f.

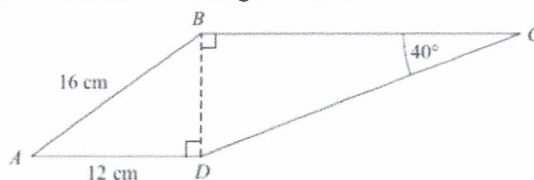


g.

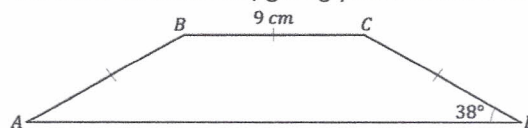


2. I put a ladder 1.5m away from a tree. The ladder is inclined at 70° above the horizontal. What is the height of the tree?
3. Ship B is 100m east of Ship A, and the bearing of Ship B from Ship A is 30° . How far due North is the ship?

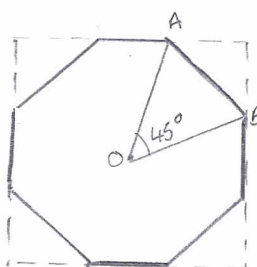
4. [Edexcel GCSE June 2012-2H Q18] The diagram shows a quadrilateral $ABCD$. $AB = 16$ cm. $AD = 12$ cm. Angle $BCD = 40^\circ$. Angle $ADB = \text{angle } CBD = 90^\circ$. Calculate the length of CD .



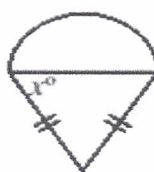
5. In the shape drawn below, $AB = BC = CD$. Work out the area of $ABCD$, giving your answer to 1 dp.



6. [OCR GCSE(9-1) SAM 6H Q16a] Simon cuts the corners off a square piece of card to leave the regular octagon shown below. O is the centre of the octagon. A and B are vertices of the octagon. $OA = OB = 5$ cm. Angle $AOB = 45^\circ$. Work out the area of the original square piece of card.



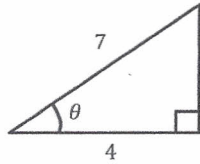
7. [IMC] The semicircle and isosceles triangle have equal areas. Find $\tan x$.



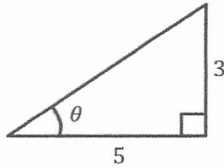
Exercise 2

1. Determine the value of θ , giving your answer to 3 significant figures.

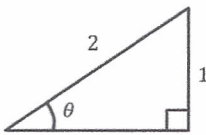
a.



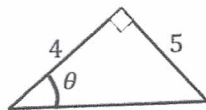
b.



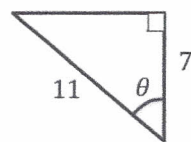
c.



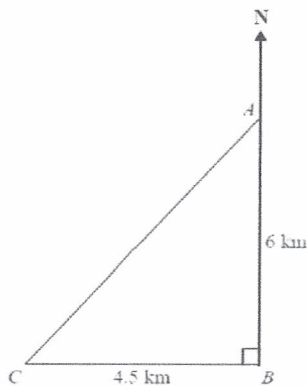
d.



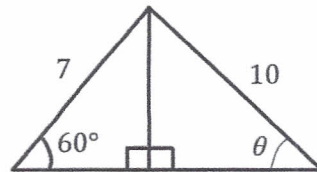
e.



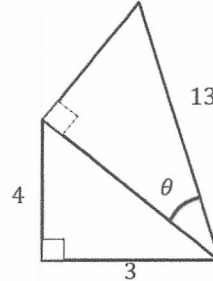
2. [Edexcel GCSE June2014-2H Q15b] The diagram shows the positions of three turbines A, B and C. Calculate the bearing of C from A. Give your answer correct to the nearest degree.



3. Determine the value of θ .

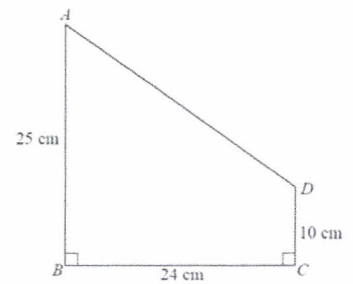


4. Determine the value of θ .



5. [Edexcel IGCSE May2015-3H Q15]

ABCD is a trapezium.
 $AB = 25$ cm.
 $BC = 24$ cm.
 $CD = 10$ cm.

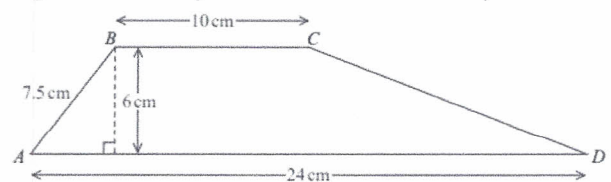


Angle $ABC = \text{angle } BCD^\circ$

Calculate the size of angle CDA .

Give your answer correct to 3 significant figures.

6. [Edexcel GCSE(9-1) Nov 2017 2F Q22, Nov 2017 2H Q7] ABCD is a trapezium. Work out the size of angle CDA . Give your answer correct to 1dp.



7. The angles $\theta_1, \theta_2, \dots$ form a sequence. Give the formula for the n^{th} term of the sequence.

