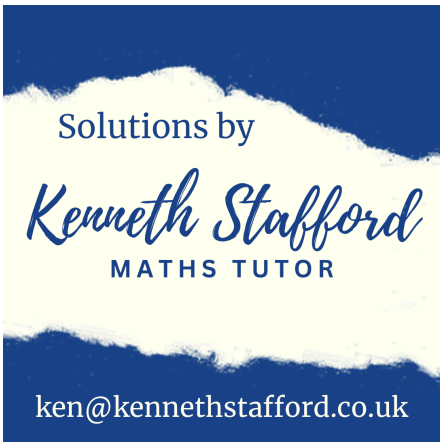
Name: SOLUTIONS

GCSE (1 - 9)

Trigonometry
SOH CAH TOA



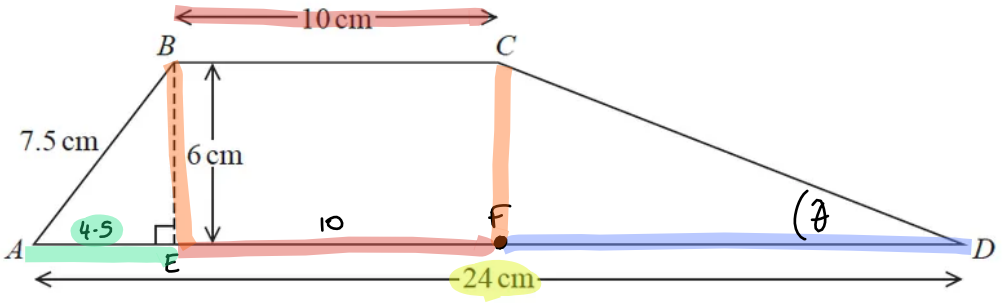


These questions are compiled from *released* Pearson Edexcel GCSE maths exam papers
They contain exam questions from up until the ***Summer 2023*** exam series
More recent exam papers do exist but are withheld for mock exams
As new exam papers are released these worksheets will gradually be updated
The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

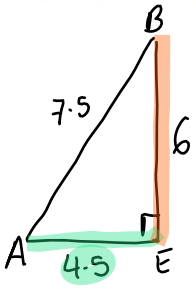
Question	Where the question appeared
1	Edexcel, GCSE, Autumn 2017, Paper 2F, Q22
2	Edexcel, GCSE, Autumn 2018, Paper 3F, Q25
3	Edexcel, GCSE, Autumn 2020, Paper 2F, Q25
4	Edexcel, GCSE, Summer 2018, Paper 3F, Q23
5	Edexcel, GCSE, Summer 2019, Paper 2F, Q24
6	Edexcel, GCSE, November 2022, Paper 2F, Q22

1

ABCD is a trapezium.



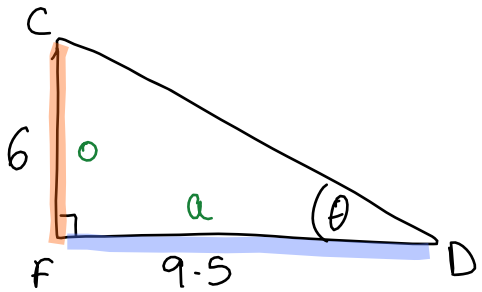
Work out the size of angle *CDA*.
Give your answer correct to 1 decimal place.



$AE = \sqrt{7.5^2 - 6^2}$

$AE = 4.5$

$FD = 24 - 10 - 4.5 = 9.5$



$\tan\theta = \frac{o}{a}$

$\tan\theta = \frac{6}{9.5}$

$\theta = \tan^{-1}\left(\frac{6}{9.5}\right)$

$\theta = 32.3°$

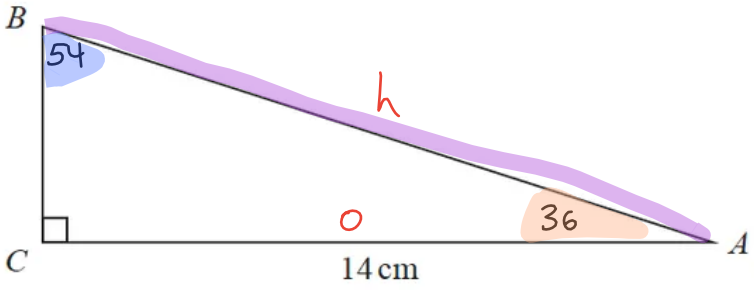
32.3 °

(Total for Question 22 is 5 marks)

[Edexcel, GCSE, Autumn 2017, Paper 2F, Q22]

2

ABC is a right-angled triangle.



$AC = 14$ cm.
Angle $C = 90°$

size of angle B : size of angle $A = 3 : 2$

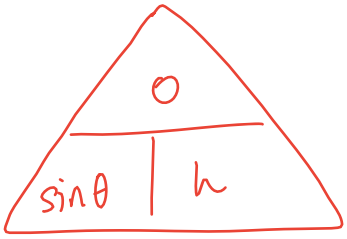
$3 + 2 = 5$

$90 \div 5 = 18$

$18 \times 3 = 54$

$18 \times 2 = 36$

Work out the length of AB.
Give your answer correct to 3 significant figures.



$$h = \frac{O}{\sin\theta}$$

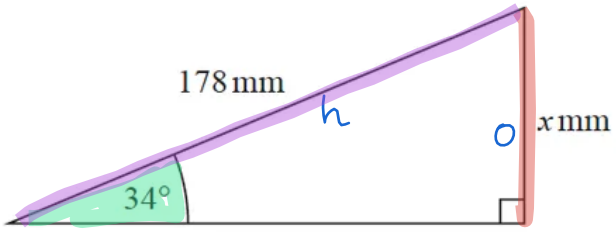
$$h = \frac{14}{\sin(54)} = 17.3$$

17.3 cm

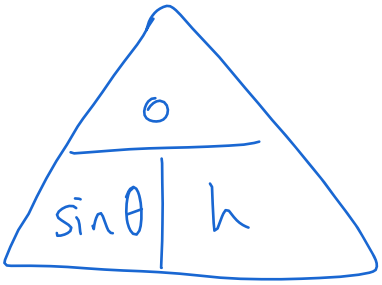
(Total for Question 25 is 4 marks)

[Edexcel, GCSE, Autumn 2018, Paper 3F, Q25]

3



Work out the value of x.
Give your answer correct to 1 decimal place.



opp = sinθ × h

x = sin(34) × 178

x = 99.536

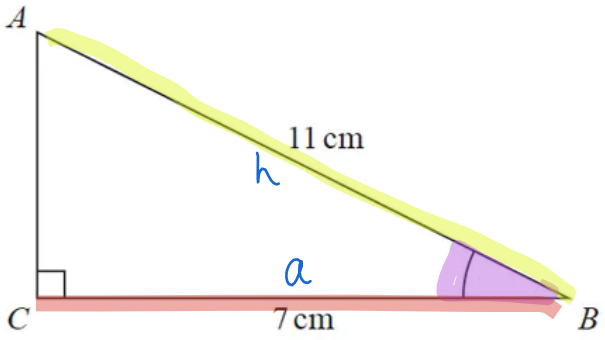
99.5

(Total for Question 25 is 2 marks)

[Edexcel, GCSE, Autumn 2020, Paper 2F, Q25]

4

ABC is a right-angled triangle.



(a) Work out the size of angle ABC.
Give your answer correct to 1 decimal place.

$\cos\theta = \frac{a}{h}$

$\cos\theta = \frac{7}{11}$

$\theta = \cos^{-1}\left(\frac{7}{11}\right) = 50.478$

50.5 °

(2)

The length of the side AB is reduced by 1 cm.

The length of the side BC is still 7 cm.
Angle ACB is still 90°

(b) Will the value of cos ABC increase or decrease?
You must give a reason for your answer.

The angle will decrease.
Angle is now 45.6°

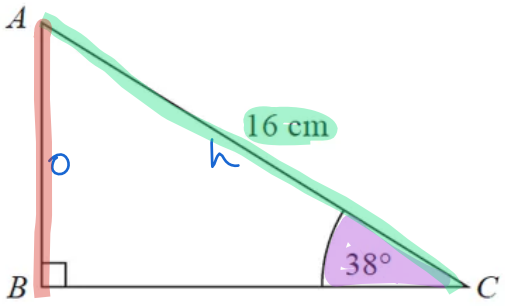
(1)

(Total for Question 23 is 3 marks)

[Edexcel, GCSE, Summer 2018, Paper 3F, Q23]

5

ABC is a right-angled triangle.



Calculate the length of AB.
Give your answer correct to 2 decimal places.



opp = sin θ × h

opp = sin (38) × 16

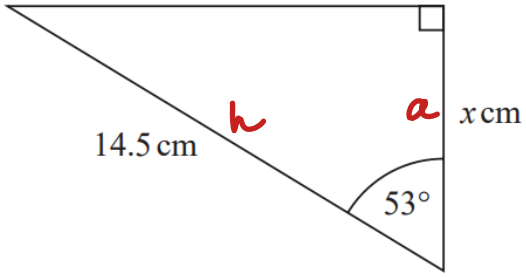
= 9.8505

9.85 ..... cm

(Total for Question 24 is 2 marks)

[Edexcel, GCSE, Summer 2019, Paper 2F, Q24]

6



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

$\cos\theta = \frac{a}{h}$

$a = h \times \cos\theta$

$a = 14.5 \times \cos(53)$

$x =$ 8.73

(Total for Question 22 is 2 marks)

[Edexcel, GCSE, November 2022, Paper 2F, Q22]