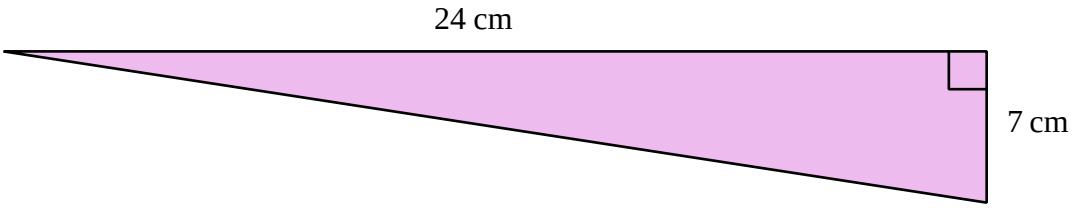
Trial Trail Revision #2

IGCSE Mathematics
Trial Trail Revision Papers

Answer as many questions as you can
You are expected to have a calculator available
Marks Available : 40

Question 1
A right angled triangle has a base of 24 cm, and a height of 7 cm, as shown.



(i) Work out the area of the triangle.
Be sure to state the units of your answer.

[2 marks]

(ii) Use the Theorem of Pythagoras to calculate the length of the hypotenuse of the triangle.

[2 marks]

(iii) State the perimeter of the triangle.

[1 mark]

Question 2
Expand the brackets and simplify;

(i) $(x - 2)(x - 7)$

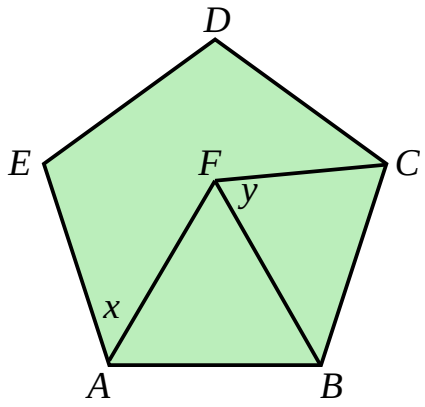
[2 marks]

(ii) $(4x + 3)(x + 5)$

[2 marks]

Question 3

The diagram shows an equilateral triangle *ABF* and a regular pentagon *ABCDE*



(i) What is the size of the angle marked x ?

[2 marks]

(ii) What is the size of the angle marked y ?

[2 marks]

Question 4

Solve, $5(x - 4) = 35$

[2 marks]

Question 5

(i) Write down the value of π^0

[1 mark]

(ii) Given that $3^{-4} \times 3^7 = 3^n$ find the value n

[1 mark]

(iii) Given that $\dfrac{5^{26} \times 5^m}{5^{13}} = 5^{17}$ find the value of m

[2 marks]

Question 6

An famous old steam train, *The Evening Star*, is making a special non-stop journey from Shrewsbury to London.

It leaves Shrewsbury at 10:23 and arrives in London at 13:08.

(i) How long, in hours and minutes, did the journey take ?

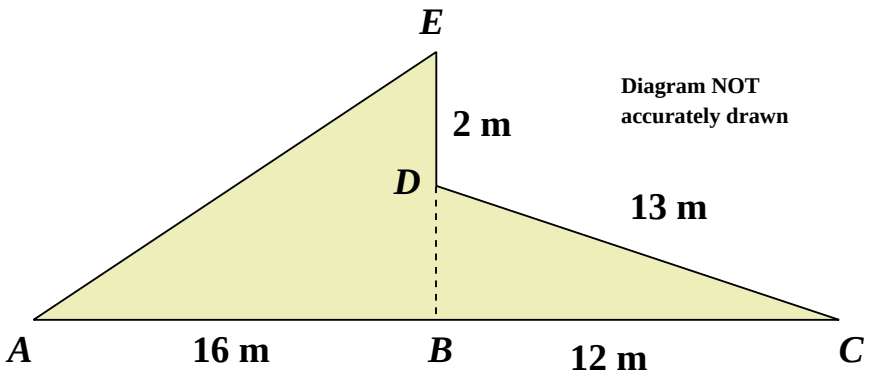
[2 marks]

(ii) Given that the distance between Shrewsbury and London is 260 km, what is the average speed of *The Evening Star* for the journey ?
Give your answer in km/h

[3 marks]

Question 7

The diagram below shows the cross-section of a factory roof.
EDB is vertical and *ABC* is horizontal.



(i) Calculate the length *BD*.

[3 marks]

(ii) Calculate the area of the cross-section of the roof.

[3 marks]

Question 8

The table shows information about the numbers of children in 25 families.

Number of children in the family	Number of families (Frequency)
1	4
2	9
3	8
4	0
5	4

Work out the mean number of children in these 25 families.

[4 marks]

Question 9

Ophelia is trying to solve the following sandwich inequality,

$$13 \leqslant 3x + 7 \leqslant 22$$

Given that x is an integer, list the possible values of x

[3 marks]

Question 10

Solve, $\dfrac{12 - x}{3} = 7$

[3 marks]