



Lite GCSE Maths

Tigonometry & Pythagoras 1

Name: _____

Class: _____

Author:

Date:

Time: 36

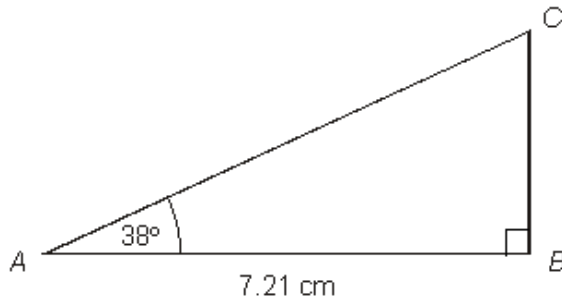
Marks: 29

Comments:

Q1. Triangle ABC has a right angle at B .

Angle $BAC = 38^\circ$

$AB = 7.21$ cm



Not drawn accurately

Calculate the length of BC .

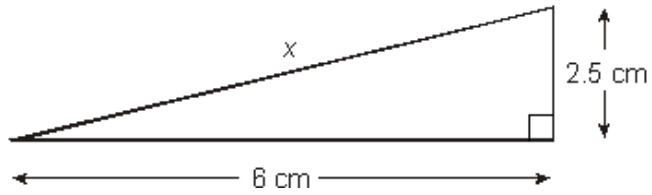
Give your answer to an appropriate degree of accuracy.

.....
.....
.....
.....

Answer cm

(Total 4 marks)

Q2. The diagram shows a right-angled triangle.



Not drawn accurately

Calculate the length x .

.....

.....

.....

.....

Answer cm

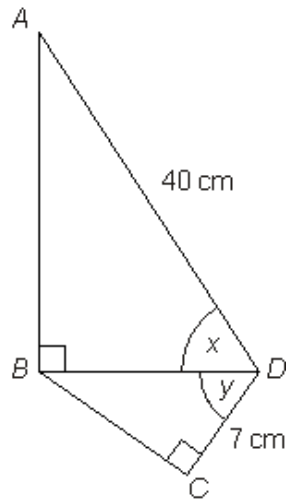
(Total 3 marks)

Q3. The diagram shows two right-angled triangles.

$AD = 40$ cm

$CD = 7$ cm

$$\cos x = \frac{5}{8}$$



Not drawn accurately

Find the value of $\sin y$.

.....

.....

.....

.....

.....

.....

.....

.....

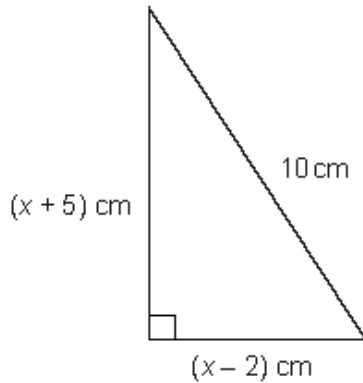
.....

.....

Answer

(Total 6 marks)

Q4. This right-angled triangle has sides of lengths $(x - 2)$ cm, $(x + 5)$ cm and 10 cm.



Not drawn accurately

Calculate the value of x .
Give your answer to an appropriate degree of accuracy.

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

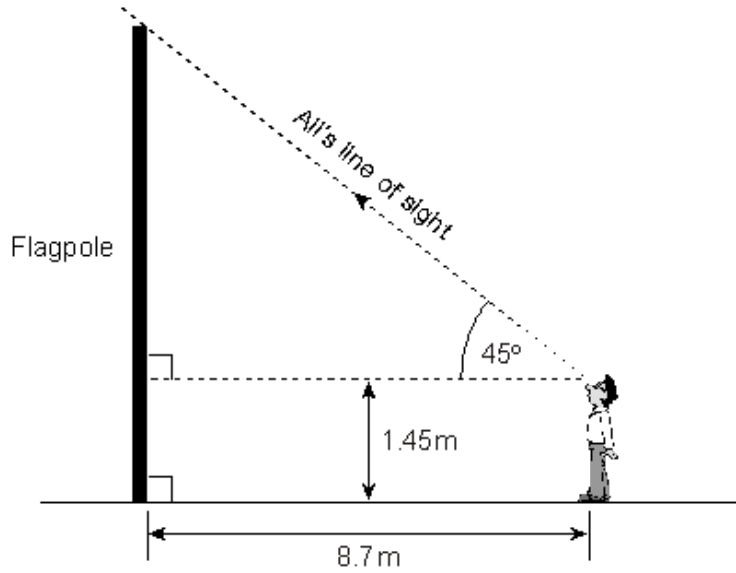
Answer cm

(Total 5 marks)

- Q5.** (a) Ali uses this method to estimate the height of a flag pole.
- He stands, as shown, so that his angle of sight is 45° when he looks up to the top of the flag pole.
 - He then measures his distance from the flagpole.
 - Finally he measures the distance that his eyes are above the ground.

This sketch shows Ali's measurements.

Not drawn accurately



Use Ali's measurements to calculate the height of the flag pole, explaining why he uses an angle of 45° .

.....

.....

.....

.....

Answer m

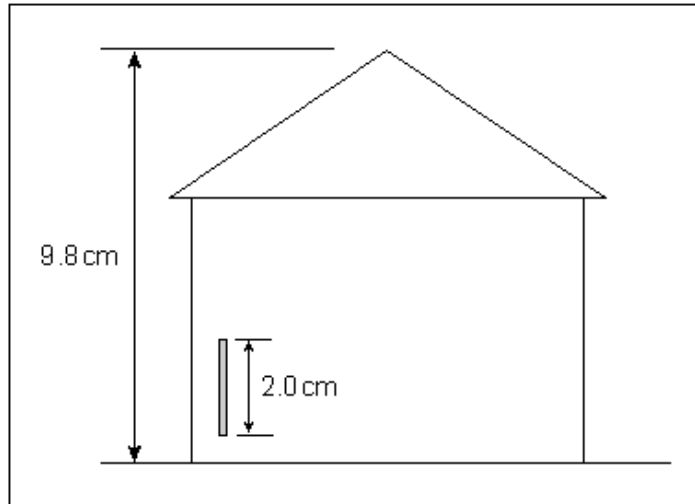
(2)

(b) Ben uses this method to estimate the height of a building.

- He tapes a 1 metre ruler to the building.
- He takes a photograph of the building and the metre ruler.

On the graph he measures the height of the building and the length of the ruler. The measurements are shown on this sketch.

Not drawn accurately



Use this information to estimate the height of the building. Give your answer to the nearest metre.

.....

.....

.....

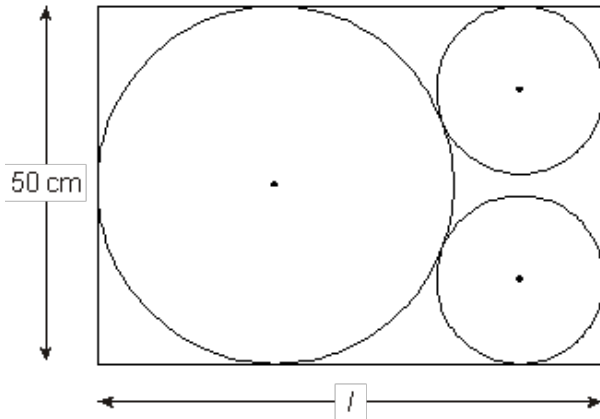
.....

Answer metres

(3)
(Total 5 marks)

Q6. Three circles fit inside a rectangle as shown.

Two of the circles are identical and the third is larger.
The circles have radii 9 cm, 9 cm and 25 cm.



Not drawn accurately

Calculate the length, l , of the rectangle.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

Answer cm

(Total 6 marks)

