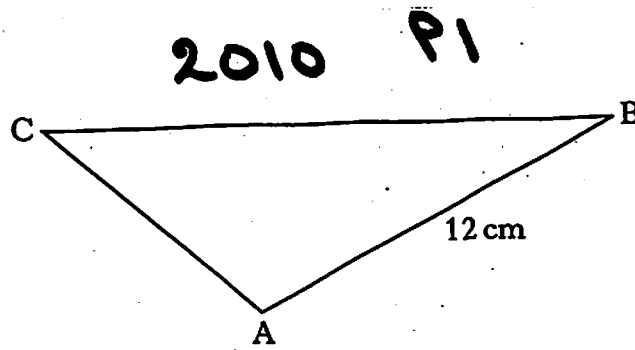


A

6.



In triangle ABC,  $AB = 12$  centimetres,  $\sin C = \frac{1}{2}$  and  $\sin B = \frac{1}{3}$ .

Find the length of side AC.

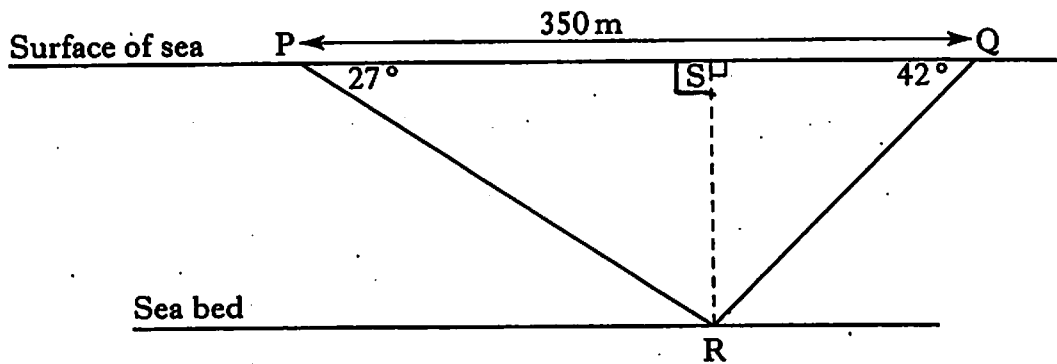
3

B

2010 P2

12. Two ships have located a wreck on the sea bed.

In the diagram below, the points P and Q represent the two ships and the point R represents the wreck.



The angle of depression of R from P is  $27^\circ$ .

The angle of depression of R from Q is  $42^\circ$ .

The distance PQ is 350 metres.

Calculate QS, the distance ship Q has to travel to be directly above the wreck.

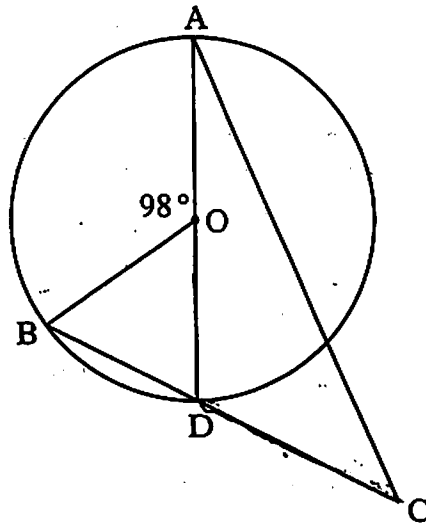
Do not use a scale drawing.

5

C

12.

2011 P2



AD is a diameter of a circle, centre O.

B is a point on the circumference of the circle.

The chord BD is extended to a point C, outside the circle.

Angle BOA =  $98^\circ$ .

DC = 9 centimetres. The radius of the circle is 7 centimetres.

Calculate the length of AC.

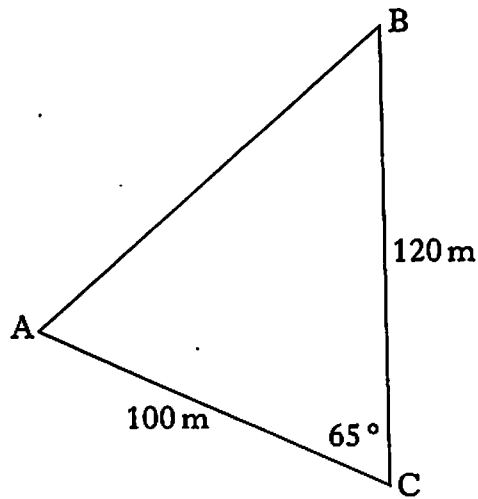
# Trigonometry Int 2 PP 2001 -2008

2002 P2 calculator

Marks

**A**

1. The sketch shows a triangle, ABC.



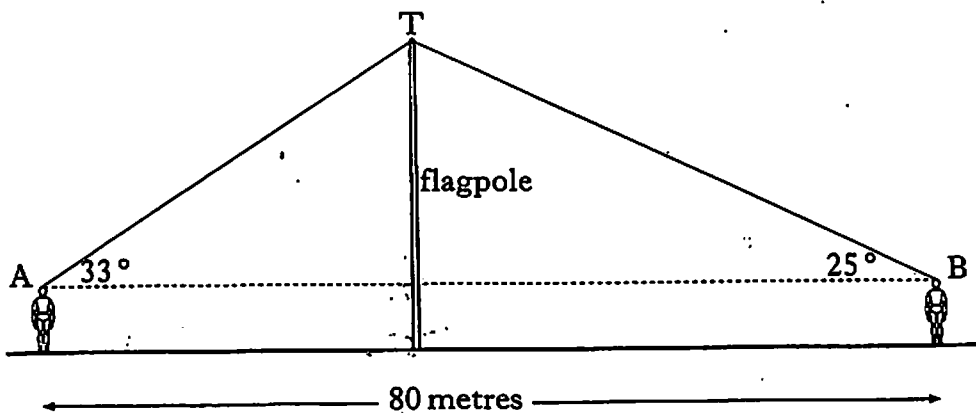
Calculate the area of the triangle.

2

2002 P2 calculator

**B**

8. The diagram shows two positions of a surveyor as he views the top of a flagpole.



From position A, the angle of elevation to T at the top of the flagpole is 33°.

From position B, the angle of elevation to T at the top of the flagpole is 25°.

The distance AB is 80 metres and the height of the surveyor to eye level is 1.6 metres.

Find the height of the flagpole.

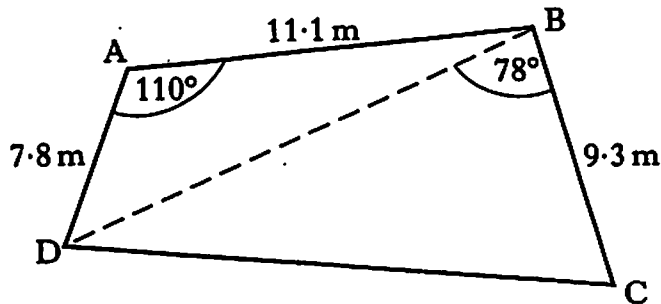
6

# Trigonometry Int 2 PP 2001 -2008

C

2004 P2 calculator

7. A garden, in the shape of a quadrilateral, is represented in the diagram below.



Calculate:

- (a) the length of the diagonal BD;

**Do not use a scale drawing**

3

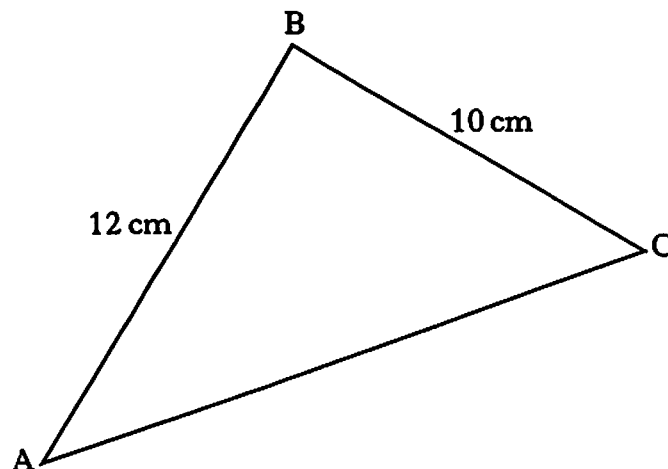
- (b) the area of the garden.

4

D

2006 P1 non calculator

4.



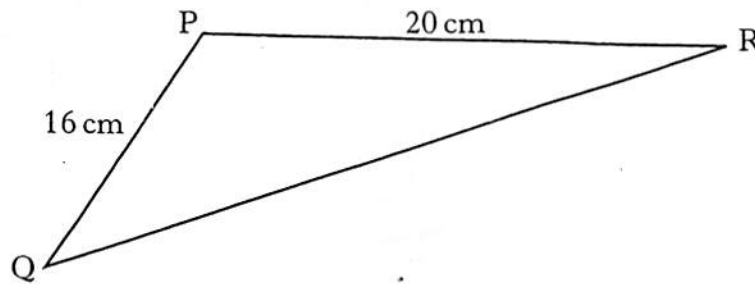
Calculate the area of triangle ABC if  $\sin B = \frac{2}{3}$ .

2

# Trigonometry Int 2 PP 2001 -2008

E

6. Triangle PQR is shown below. *2008 P1 non calculator*

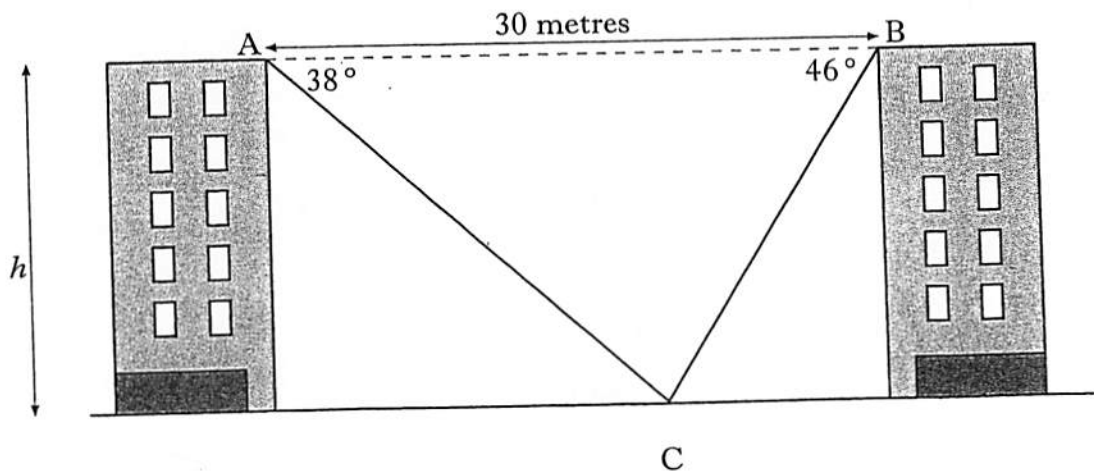


If  $\sin P = \frac{1}{4}$ , calculate the area of triangle PQR.

2

F

9. The diagram shows two blocks of flats of equal height. *2007 P2 calculator*



A and B represent points on the top of the flats and C represents a point on the ground between them.

To calculate the height,  $h$ , of each block of flats, a surveyor measures the angles of depression from A and B to C.

From A, the angle of depression is  $38^\circ$ .

From B, the angle of depression is  $46^\circ$ .

The distance AB is 30 metres.

Calculate the height,  $h$ , in metres.

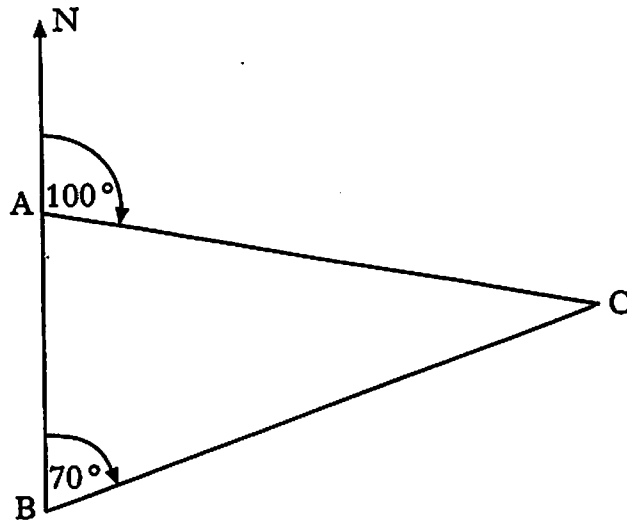
5

# Trigonometry Int 2 PP 2001 -2008

G

10. The diagram below shows the position of three campsites A, B and C. *2006 P2 calculator*

Marks



Alan sets off from campsite A on a bearing of  $100^\circ$  at an average speed of 5.6 kilometres per hour.

At the same time Bob sets off from campsite B on a bearing of  $070^\circ$ .

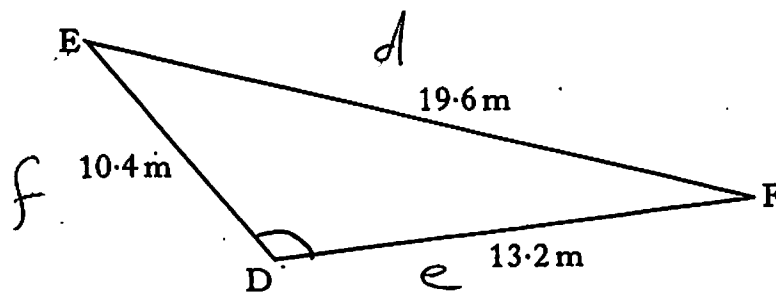
After 3 hours they both arrive at campsite C.

Who has the faster average speed and by how much?

5

H

5. Triangle DEF is shown below. *2008 P2 calculator*



It has sides of length 10.4 metres, 13.2 metres and 19.6 metres.

Calculate the size of angle EDF.

Do not use a scale drawing.

3