EXAM PAPERS PRACTICE

Sine & Cosine Rules

Question Paper
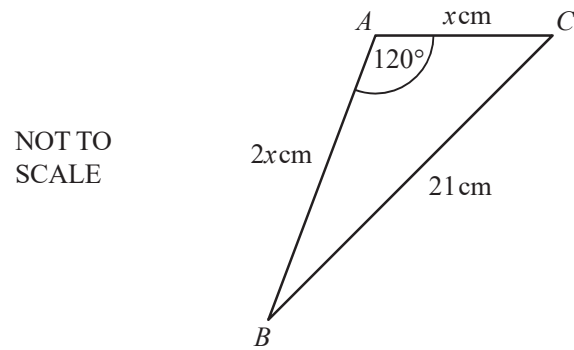
NOT TO SCALE

Calculate PR.　　　　　　　　　　　　　　　　　　　　　　　　　　　　　[3]

NOT TO
SCALE
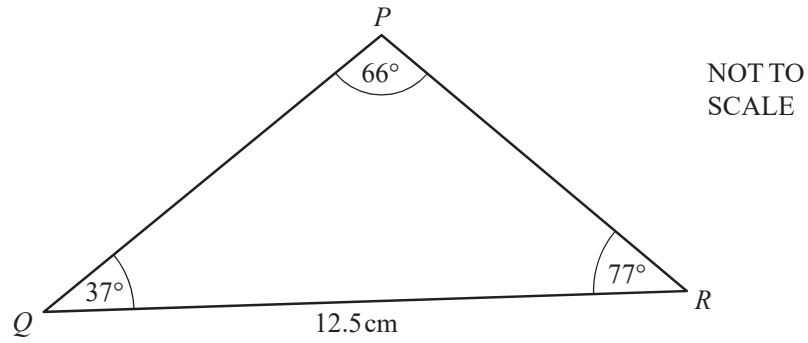
In triangle ABC, $AB = 2x$ cm, $AC = x$ cm, $BC = 21$ cm and angle $BAC = 120°$.
Calculate the value of x. [3]

North

North

C

2.7 km

4.5 km

NOT TO
SCALE

A

5 km

B
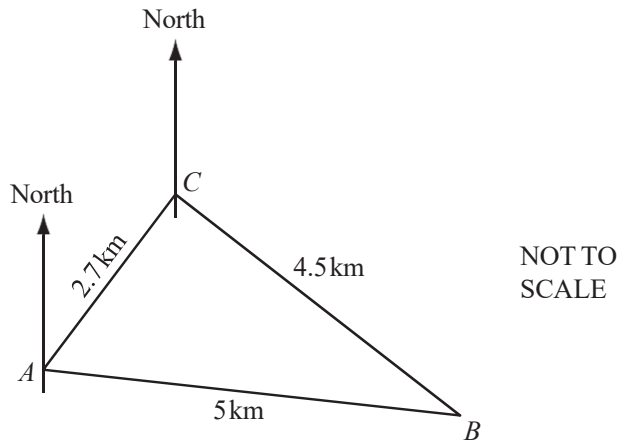
The diagram shows 3 ships A, B and C at sea.

$AB = 5$ km, $BC = 4.5$ km and $AC = 2.7$ km.
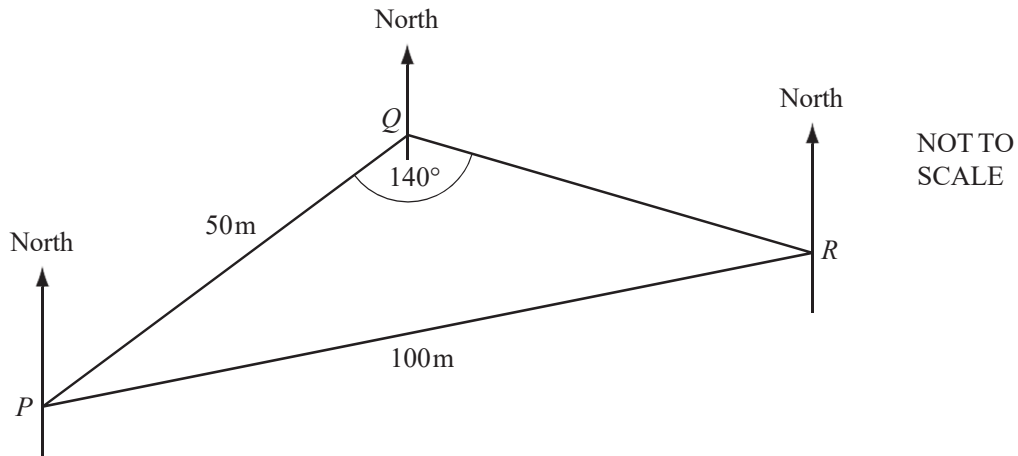
(a) Calculate angle ACB.
Show all your working. [4]

(b) The bearing of A from C is $220°$.

[1]

Calculate the bearing of B from C.

The diagram shows three points *P*, *Q* and *R* on horizontal ground.

PQ = 50 m, *PR* = 100 m and angle *PQR* = 140°.

(a) Calculate angle *PRQ*.

[3]

(b) The bearing of *R* from *Q* is 100°.

Find the bearing of *P* from *R*.

[2]
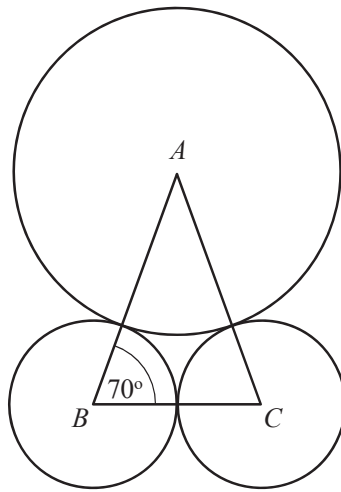
A triangle has sides of length 2 cm, 8 cm and 9 cm.

Calculate the value of the largest angle in this triangle. [4]

NOT TO
SCALE

The diagram shows three touching circles.
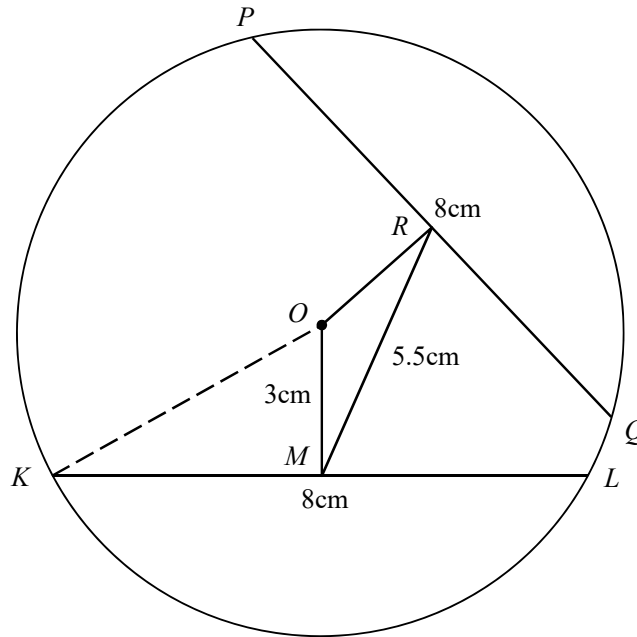*A* is the centre of a circle of radius *x* centimetres.
B and *C* are the centres of circles of radius 3.8 centimetres. Angle *ABC* = 70°.
Find the value of *x*. [3]

NOT TO SCALE

In the circle, centre O, the chords KL and PQ are each of length 8 cm.
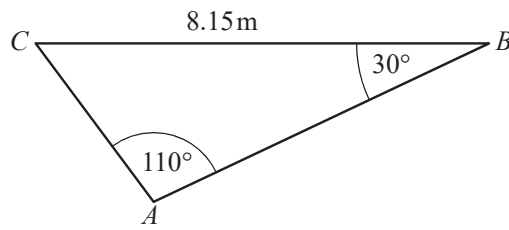M is the mid-point of KL and R is the mid-point of PQ. $OM = 3$ cm.

(a) Calculate the length of OK.

[2]

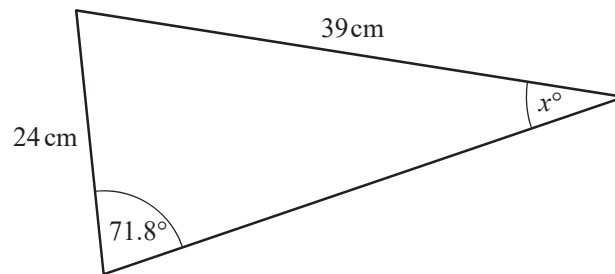**(b)** RM has a length of 5.5 cm. Calculate angle ROM.

[3]

Question 8

C ——— 8.15 m ——— B
30°
110°
A

NOT TO
SCALE

Calculate AC. [3]

Question 9

39 cm
$x°$
24 cm
71.8°

NOT TO
SCALE

Find the value of x. [3]

NOT TO
SCALE
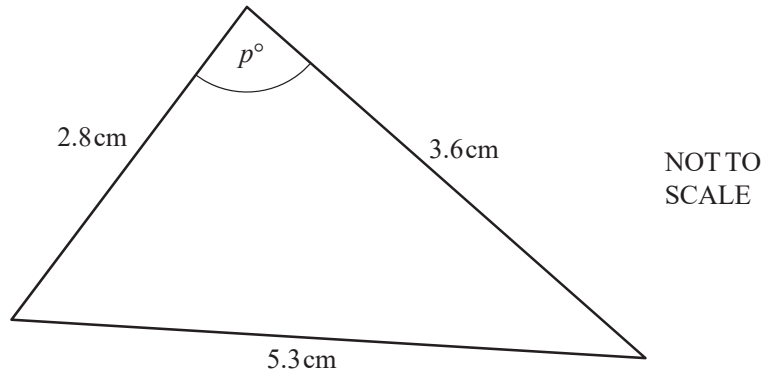
Find the value of p.   [4]

74°

NOT TO
SCALE

y cm

39°

12.4 cm
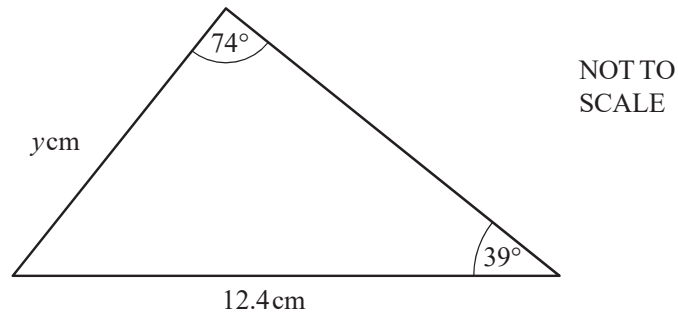
Calculate the value of y. [3]

Question 12

C

100°

NOT TO
SCALE

30°

A

24 cm

B
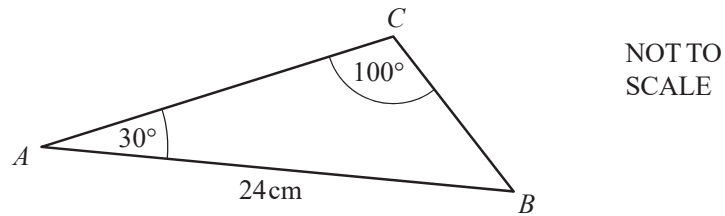
Use the sine rule to calculate BC. [3]
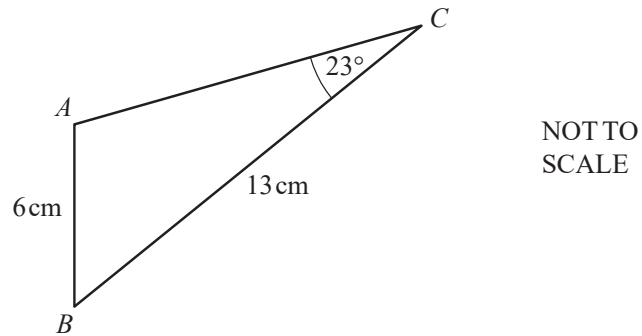
In triangle *ABC*, *AB* = 6 cm, *BC* = 13 cm and angle *ACB* = 23°.
Calculate angle *BAC*, which is obtuse. [4]