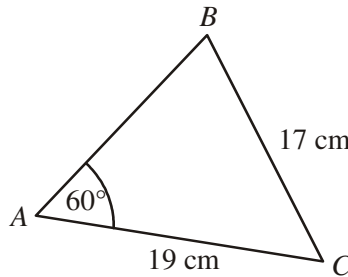


The SINE and COSINE rule

1. (a) ABC is a triangle.
 $AC = 19$ cm, $BC = 17$ cm and angle $BAC = 60^\circ$



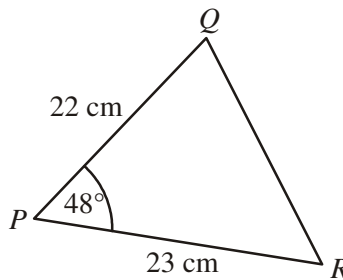
Not to scale

Calculate the size of angle ABC .

.....

Answer degrees

- (b) PQR is a triangle.
 $PR = 23$ cm, $PQ = 22$ cm and angle $QPR = 48^\circ$



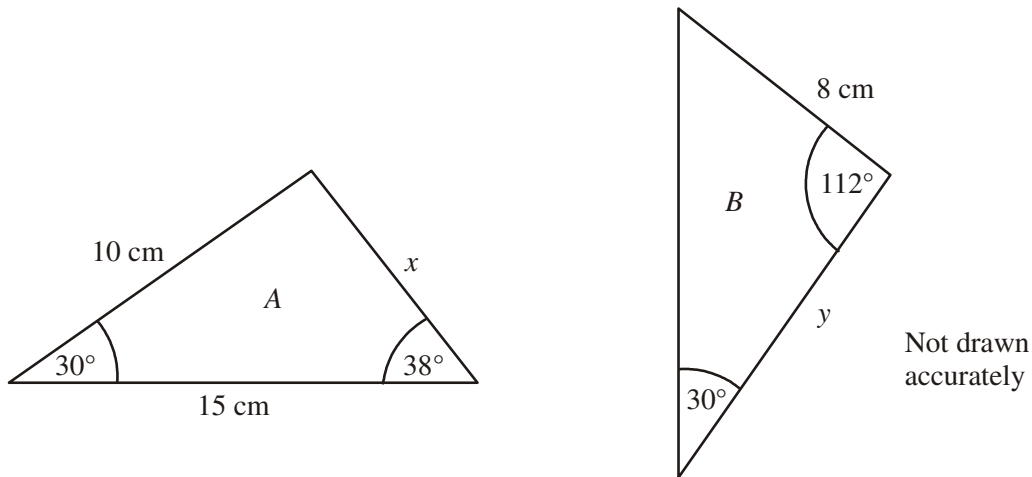
Not to scale

Calculate the length of QR .
 Give your answer to an appropriate degree of accuracy.

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Answer cm

2. The triangles A and B are congruent.



(a) Write down the values of x and y .

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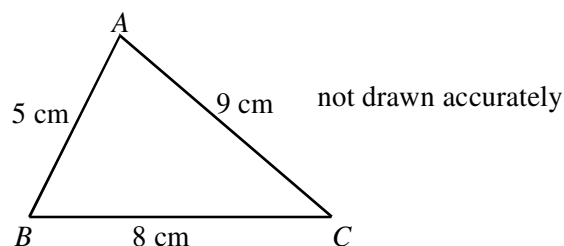
Answer $x = \dots\dots\dots$ cm, $y = \dots\dots\dots$ cm

(b) Given that $\sin 30^\circ = 0.5$, calculate the area of triangle A .
State the units of your answer.

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Answer

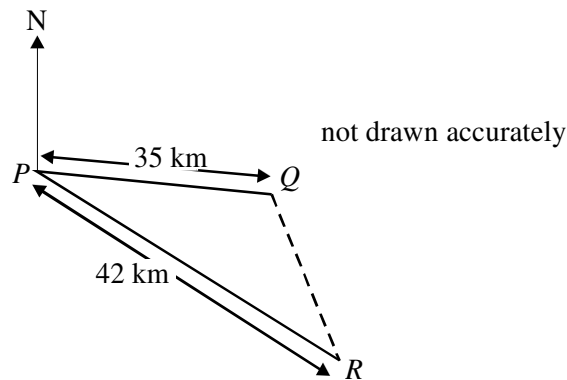
3. In triangle ABC , $AB = 5$ cm, $BC = 8$ cm and $AC = 9$ cm.



Use the cosine rule to show that triangle ABC does **not** contain an obtuse angle.

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4. The diagram shows the positions of three towns, P , Q and R .
 Q is 35 km from P on a bearing 10° .
 R is 42 km from P on a bearing 12° .

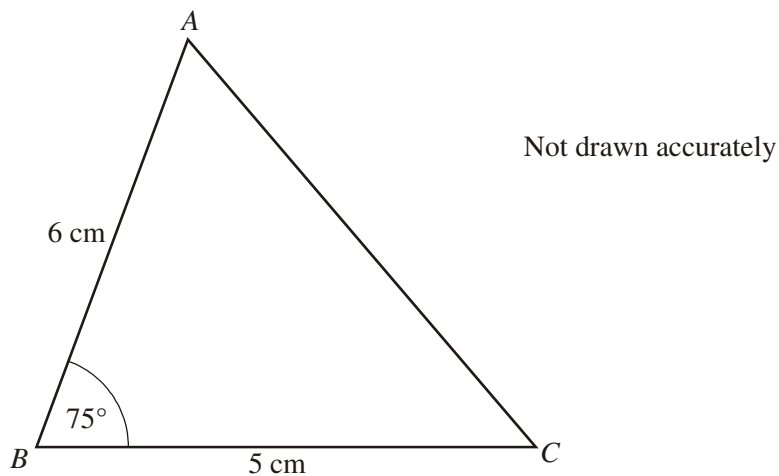


Calculate the distance from Q to R .

.....

Answer.....km

5. The diagram shows a triangle ABC .
 $AB = 6$ cm, $BC = 5$ cm and angle $B = 75^\circ$



You are given that $\sin 75^\circ = 0.966$ to 3 significant figures.

Calculate the area of the triangle.
 Give your answer to a suitable degree of accuracy.

.....

Answer cm^2