

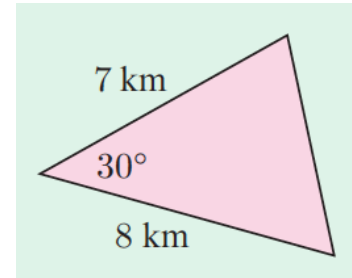
Area of Triangle: $A = \frac{1}{2}ab\sin C$

Sine Rule: $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$

Cosine Rule: $c^2 = a^2 + b^2 - 2ab\cos C$ or $\cos C = \frac{a^2 + b^2 - c^2}{2ab}$

Review Set 9A:

1. Use the triangle at the right and determine the missing side length, both angles, and the area of the triangle.

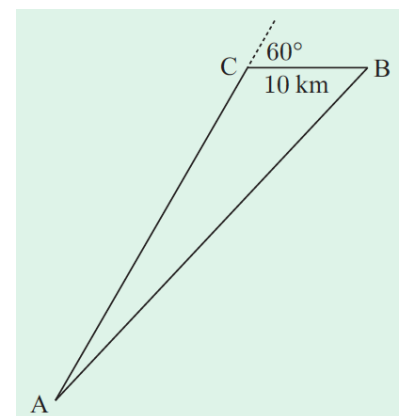


4. A triangle has sides of length 7 cm and 13 cm, and its area is 42 cm².
a) Find the Sine of the included angle between the two given sides.

b) What are the possible angle measures for this included angle? Are there more than one?

c) Using the smallest angle measure that you found in part (b), find the measure of the 3rd side of the triangle.

5. A boat is meant to be sailing directly from A to B (see the diagram). However, it travels in a straight line to point C before the captain realizes they are off course. The boat is turned through an angle of 60° then travels another 10 km to B. The trip would have been 4 km shorter if the boat had gone directly from A to B. How far did the boat travel?

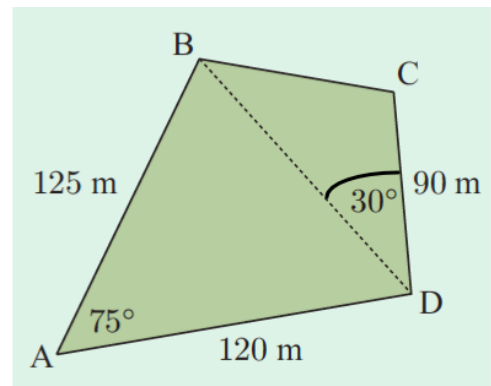


Review Set 9B:

5. From point A, the angle of elevation to the top of a building is 20° . On walking 80 m towards the building, the angle of elevation to the top of a building is now 23° . How tall is the building?

Review Set 9C:

4. Anke and Lucas are considering buying a block of land. The land agent supplies them with the given accurate sketch on the right. Find the area of this piece of property.



Not from the book:

Triangle ABC has the following properties: $m\angle C = 135^\circ$, $AC = 10\text{ cm}$ & $\text{Area of triangle} = 44.194\text{ cm}^2$.

Determine the measures of the other 2 side lengths, AB and CB.