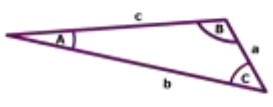


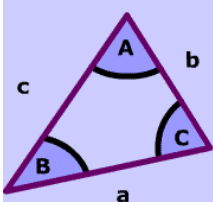
Label the following information on a triangle. Find as much additional information as possible.
 Make a new triangle for each problem

Law of Cosine Example

$$\frac{\sin(A)}{a} = \frac{\sin(B)}{b} = \frac{\sin(C)}{c}$$


$$\frac{a}{\sin(A)} = \frac{b}{\sin(B)} = \frac{c}{\sin(C)}$$

Law of Cosines

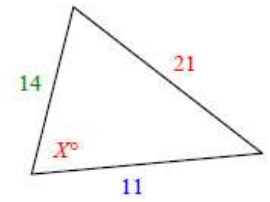


$$a^2 = b^2 + c^2 - 2bc \cdot \cos(A)$$

$$b^2 = a^2 + c^2 - 2ac \cdot \cos(B)$$

$$c^2 = a^2 + b^2 - 2ab \cdot \cos(C)$$

© www.mathwarehouse.com



$$\cos C^\circ = \frac{a^2 + b^2 - c^2}{2ab}$$

$$\cos X^\circ = \frac{14^2 + 11^2 - 21^2}{2(14)(11)}$$

$$\cos X^\circ = \frac{196 + 121 - 441}{308}$$

$$\cos X^\circ = \frac{-124}{308}$$

$$\cos X^\circ = -0.402597$$

$$\cos^{-1}(-0.402597) = X^\circ$$

$X = 113.741^\circ$

1. $A = 43^\circ$ $C = 32^\circ$ $c = 8$
 $a =$ _____
 $b =$ _____
 $B =$ _____

5. $c = 8$ $a = 9$ $A = 26^\circ$
 $b =$ _____
 $B =$ _____
 $C =$ _____

2. $A = 68^\circ$ $b = 4$ $c = 7$
 $a =$ _____
 $B =$ _____
 $C =$ _____

6. $A = 105^\circ$ $b = 5$ $a = 8$
 $c =$ _____
 $B =$ _____
 $C =$ _____

3. $a = 8$ $b = 9$ $c = 14$
 $A =$ _____
 $B =$ _____
 $C =$ _____

7. $B = 50^\circ$ $a = 3$ $C = 75^\circ$
 $b =$ _____
 $c =$ _____
 $A =$ _____

4. $A = 34^\circ$ $a = 3$ $c = 4$
 $b =$ _____
 $B =$ _____
 $C =$ _____

8. $A = 76^\circ$ $a = 5$ $b = 20$
 $c =$ _____
 $B =$ _____
 $C =$ _____