

Section 6-2 Law of Cosines

1. In $\triangle ABC$, $C=40^\circ$, $b = 20\text{cm}$, $a = 15\text{cm}$. Find c .

The Law of Cosines

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

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

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

2. In $\triangle HJK$, $h = 8\text{m}$, $j = 6\text{m}$, and $K = 172^\circ$. Find k .

3. In $\triangle ABC$, $a = 3\text{cm}$, $b = 4\text{cm}$, $c = 6\text{cm}$. Find C .

4. In $\triangle ABC$, $a = 3\text{m}$, $b = 7\text{m}$, and $c = 11\text{m}$. Find C .