

**Cosine Law:**

The Cosine Law can be used to solve for an unknown side, if you are given two sides and a contained angle:

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

It can also be re-arranged to solve for an unknown angle:

$$\cos A = \frac{b^2 + c^2 - a^2}{2bc}$$

**Example 1:** Determine the length of side 'c' to the nearest tenth.

Given  $\triangle ABC$ ,  $C = 110^\circ$ ,  $b = 15 \text{ mm}$ ,  $a = 8 \text{ mm}$

**Example 2:** Determine the value of angle D to the nearest degree.

Given  $\triangle DEF$ ,  $d = 10 \text{ cm}$ ,  $e = 15 \text{ cm}$ ,  $f = 17 \text{ cm}$