Mrs. Drolet's Memory Aid Tips Trigonometry Cosine Law
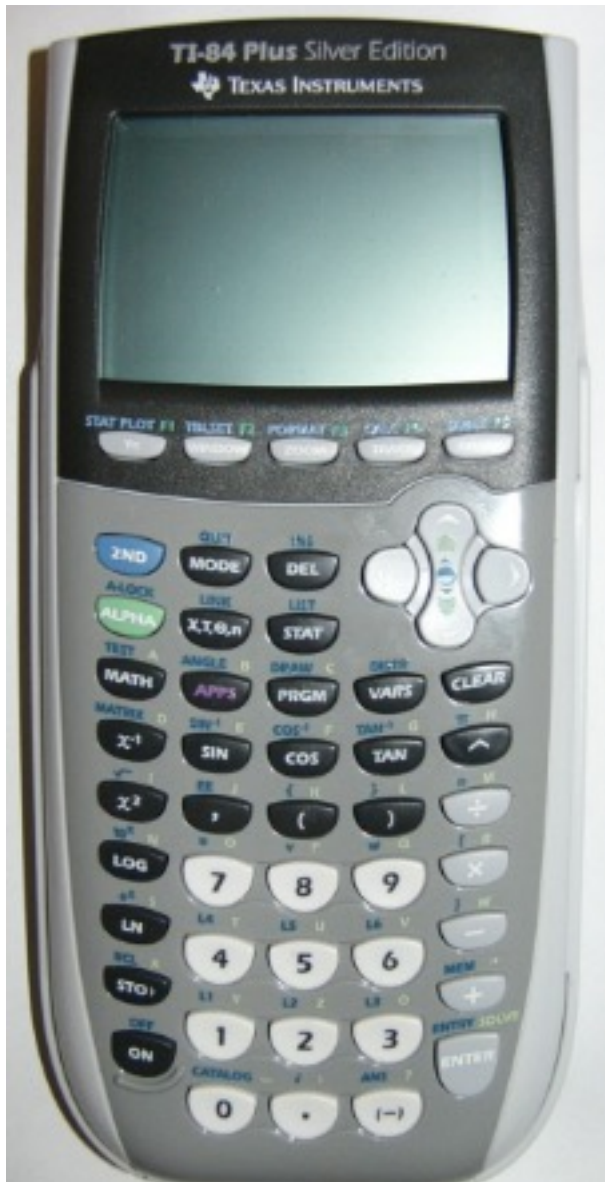
It's always safe to verify that your calculator is in the
Degree Mode

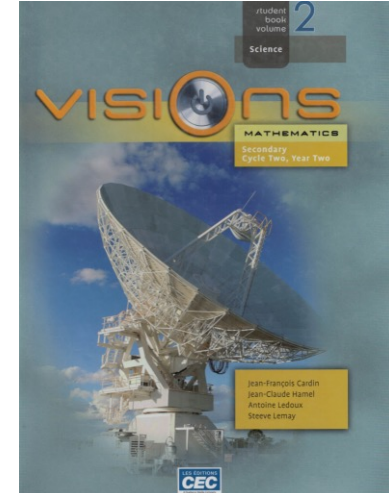$$\sin 30^0 = 0.5$$

the
safe
side

Textbook p. 186

Cosine Law

$$a^2 = b^2 + c^2 - 2bc\cos A$$
$$b^2 = a^2 + c^2 - 2ac\cos B$$
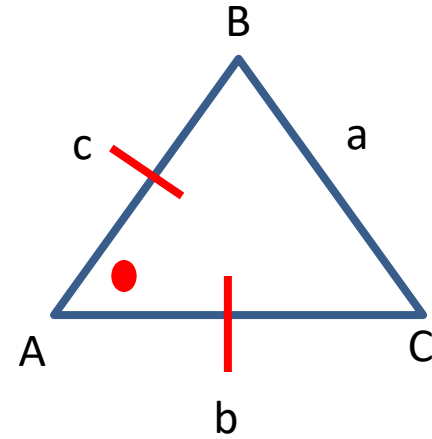$$c^2 = a^2 + b^2 - 2ab\cos C$$

The cosine law allows you to solve any given triangle, providing you know the following:
- the lengths of two sides and the measure of the angle formed by these sides
- the lengths of the three sides of the triangle

Given:

- ## Measure of 2 sides
- ## Measure of angle between 2 sides

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

known angle

2 known sides

unknown side opposite known angle

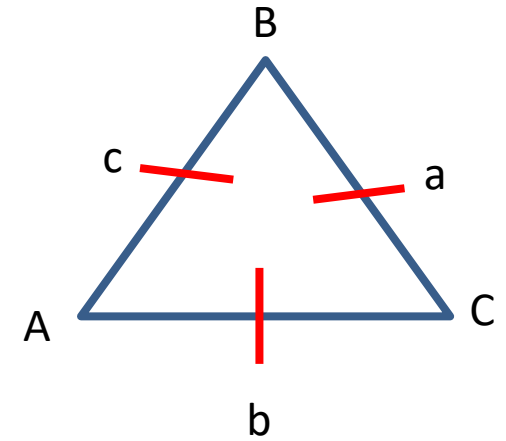# Given:

- ## Measure of 3 sides

Choose an angle

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

Side opposite unknown angle

unknown angle

Other 2 known sides