

## PC Notes on 6.2

## Law of Cosines

### Solve SAS or SSS Oblique Triangles

#### Law of Cosines:

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

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

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

- The form used depends on the angle given or being solved for
- When using MathXL, always solve for the angles and sides in the order requested and store values with all decimals available
- Otherwise when solving SSS: always solve for the largest angle first, then use Law of Sines (simpler)
- care should be used when solving for an angle

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

#### Applications:

- Carefully draw and label the triangle described or provided
- Look for parallel lines cut by a transversal in order to use laws for congruent or supplementary angles