

## YOU NEED TO KNOW THE LAW OF SINES !

**Area of a Triangle** - The area of triangle  $ABC$  is one-half the product of the lengths of any two sides and the sine of the included angle.

$$K = \frac{1}{2} bc \sin A = \frac{1}{2} ab \sin C = \frac{1}{2} ac \sin B$$

**The Law of Cosines** - If  $A$ ,  $B$  and  $C$  are the measures of the angles of a triangle and  $a$ ,  $b$  and  $c$  are the lengths of the sides opposite these angles, then

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

## YOU ALSO NEED TO KNOW HERON'S FORMULA