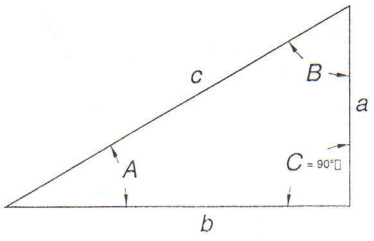
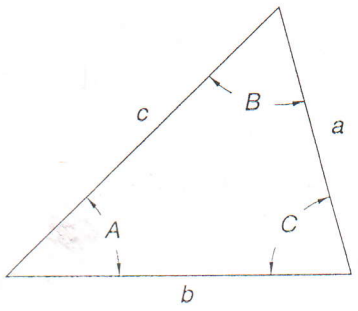
RIGHT TRIANGLES



Known Sides and Angles	Unknown Sides and Angles			Area
a and b	$c = \sqrt{a^2 + b^2}$	$A = \arctan \frac{a}{b}$	$B = \arctan \frac{b}{a}$	$\frac{a \times b}{2}$
a and c	$b = \sqrt{c^2 - a^2}$	$A = \arcsin \frac{a}{c}$	$B = \arccos \frac{a}{c}$	$\frac{a \times \sqrt{c^2 - a^2}}{2}$
b and c	$a = \sqrt{c^2 - b^2}$	$A = \arccos \frac{b}{c}$	$B = \arcsin \frac{b}{c}$	$\frac{b \times \sqrt{c^2 - b^2}}{2}$
a and ∠ A	$b = \frac{a}{\tan A}$	$c = \frac{a}{\sin A}$	$B = 90° - A$	$\frac{a^2}{2 \times \tan A}$
a and ∠ B	$b = a \times \tan B$	$c = \frac{a}{\cos B}$	$A = 90° - B$	$\frac{a^2 \times \tan B}{2}$
b and ∠ A	$a = b \times \tan A$	$c = \frac{b}{\cos A}$	$B = 90° - A$	$\frac{b^2 \times \tan A}{2}$
b and ∠ B	$a = \frac{b}{\tan B}$	$c = \frac{b}{\sin B}$	$A = 90° - B$	$\frac{b^2}{2 \times \tan B}$
c and ∠ A	$a = c \times \sin A$	$b = c \times \cos A$	$B = 90° - A$	$\frac{c^2 \sin A \cos A}{2}$
c and ∠ B	$a = c \times \cos B$	$b = c \times \sin B$	$A = 90° - B$	$\frac{c^2 \cos B \sin B}{2}$

OBLIQUE TRIANGLES



Known Sides and Angles	Unknown Sides and Angles			Area
All three sides a, b, c	$A = \arccos \frac{b^2 + c^2 - a^2}{2bc}$	$B = \arcsin \frac{b \times \sin A}{a}$	$C = 180° - A - B$	$\frac{a \times b \times \sin C}{2}$
Two sides and the angle between them a, b, ∠C	$c = \sqrt{a^2 + b^2 - (2ab \times \cos C)}$	$A = \arctan \frac{a \times \sin C}{b - (a \times \cos C)}$	$B = 180° - A - C$	$\frac{a \times b \times \sin C}{2}$
Two sides and the angle opposite one of the sides a, b, ∠A (∠B less than 90°)	$B = \arcsin \frac{b \times \sin A}{a}$	$C = 180° - A - B$	$c = \frac{a \times \sin C}{\sin A}$	$\frac{a \times b \times \sin C}{2}$
Two sides and the angle opposite one of the sides a, b, ∠A (∠B greater than 90°)	$B = 180° - \arcsin \frac{b \times \sin A}{a}$	$C = 180° - A - B$	$c = \frac{a \times \sin C}{\sin A}$	$\frac{a \times b \times \sin C}{2}$
One side and two angles a,∠A,∠B	$b = \frac{a \times \sin B}{\sin A}$	$C = 180° - A - B$	$c = \frac{a \times \sin C}{\sin A}$	$\frac{a \times b \times \sin C}{2}$