



FINDING ANGLE FUNCTIONS

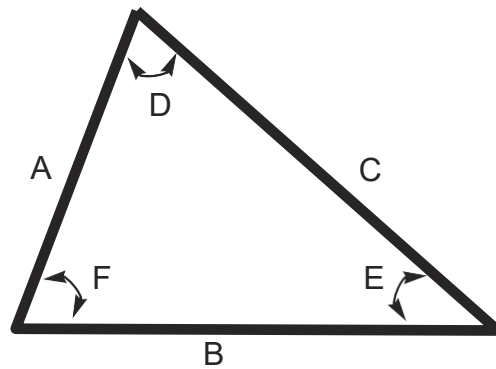
$\frac{\text{Side opposite}}{\text{Hypotenuse}}$	=	SINE
$\frac{\text{Side adjacent}}{\text{Hypotenuse}}$	=	COSINE
$\frac{\text{Side opposite}}{\text{Side adjacent}}$	=	TANGENT
$\frac{\text{Side adjacent}}{\text{Side opposite}}$	=	COTANGENT
$\frac{\text{Hypotenuse}}{\text{Side adjacent}}$	=	SECANT
$\frac{\text{Hypotenuse}}{\text{Side opposite}}$	=	COSECANT

FINDING SIDE LENGTHS FOR RIGHT-ANGLE TRIANGLES

Length of side opposite	Hypotenuse x Sine
	Hypotenuse ÷ Cosecant
	Side adjacent x Tangent
	Side adjacent ÷ Cotangent
Length of side adjacent	Hypotenuse x Cosine
	Hypotenuse ÷ Secant
	Side opposite x Cotangent
	Side opposite ÷ Tangent
Length of Hypotenuse	Side opposite x Cosecant
	Side opposite ÷ Sine
	Side adjacent x Secant
	Side adjacent ÷ Cosine

ANGLE FORMULAS

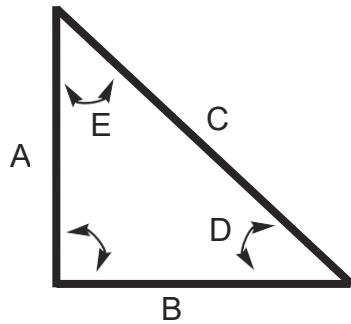
OBLIQUE TRIANGLES



A	B - D - E	$\frac{B \times \sin E}{\sin D} = A$
B	A - D - E	$\frac{A \times \sin D}{\sin E} = B$
C	A - F - E	$\frac{A \times \sin F}{\sin E} = C$
C	B - F - D	$\frac{B \times \sin F}{\sin D} = C$
D	E & F	$180^\circ - (E^\circ + F^\circ) = D^\circ$
D	A - B - F	$\frac{B \times \sin F}{A - (B \times \cos F)} = \tan D$
D	A - B - C	$\frac{C^2 + A^2 - B^2}{2 \times C \times A} = \cos D$
D	A - B - E	$\frac{B \times \sin E}{A} = \sin D$
E	D & F	$180^\circ - (D^\circ + F^\circ) = E^\circ$
E	A - B - F	$\frac{B \times \operatorname{cosec} F}{A} - \cot F = \cot E$
E	A - C - F	$\frac{A \times \sin F}{C} = \sin E$
E	A - B - D	$\frac{A \times \sin D}{B} = \sin E$
F	D & E	$180^\circ - (D^\circ + E^\circ) = F^\circ$
F	C - D - B	$\frac{C \times \sin D}{B} = \sin F$
AREA	A - B - F	$\frac{A \times B \times \sin F}{2} = \text{AREA}$

ANGLE FORMULAS

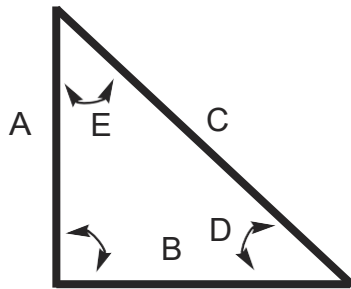
RIGHT TRIANGLES



A	C & D	$C \times \sin D = A$	$\frac{C}{\text{COSEC } D} = A$
A	C & E	$C \times \cos E = A$	$\frac{C}{\text{SEC } E} = A$
A	B & D	$B \times \tan D = A$	$\frac{B}{\text{COT } D} = A$
A	B & E	$B \times \cot E = A$	$\frac{B}{\text{TAN } E} = A$
A	C & B	$\sqrt{C^2 - B^2} = A$	
B	C & D	$C \times \cos D = B$	$\frac{C}{\text{SEC } D} = B$
B	C & E	$C \times \sin E = B$	$\frac{C}{\text{COSEC } E} = B$
B	A & D	$A \times \cot D = B$	$\frac{A}{\text{TAN } D} = B$
B	A & E	$A \times \tan E = B$	$\frac{A}{\text{COTAN } E} = B$
B	C & A	$\sqrt{C^2 - A^2} = B$	
C	A & D	$A \times \text{COSEC } D = C$	$\frac{A}{\text{SIN } D} = C$
C	A & E	$A \times \text{SEC } E = C$	$\frac{A}{\text{COS } E} = C$
C	B & E	$B \times \text{COSEC } E = C$	$\frac{B}{\text{SIN } E} = C$
C	B & D	$B \times \text{SEC } D = C$	$\frac{B}{\text{COS } D} = C$
C	A & B	$\sqrt{A^2 + B^2} = C$	

ANGLE FORMULAS

RIGHT TRIANGLES



D	A & C	$\frac{A}{C} = \sin D$	$\frac{C}{A} = \text{COSEC } D$
D	B & C	$\frac{B}{C} = \cos D$	$\frac{C}{B} = \text{SEC } D$
D	A & B	$\frac{A}{B} = \tan D$	$\frac{B}{A} = \text{COT } D$
D	E	$90^\circ - E^\circ = D^\circ$	
E	B & C	$\frac{B}{C} = \sin E$	$\frac{C}{B} = \text{COSEC } E$
E	A & C	$\frac{A}{C} = \cos E$	$\frac{C}{A} = \text{SEC } E$
E	A & B	$\frac{B}{A} = \tan E$	$\frac{A}{B} = \text{COT } E$
E	D	$90^\circ - D^\circ = E^\circ$	
AREA	A & B	$\frac{A \times B}{2} = \text{AREA}$	
AREA	A & D	$\frac{A^2 \times \text{COT } D}{2} = \text{AREA}$	
AREA	B & D	$\frac{B^2 \times \text{TAN } D}{2} = \text{AREA}$	
AREA	C & D	$\frac{C^2 \times \sin 2D}{4} = \text{AREA}$	