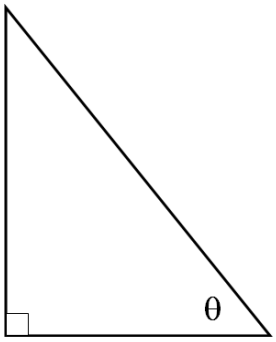
Right Triangle Trigonometry



Use the sides of a right triangle to define the six trigonometric functions:

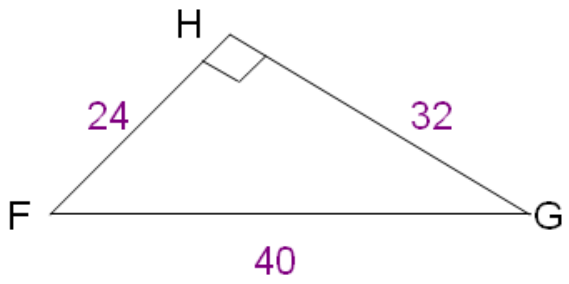
Sine Cosine Tangent
Cosecant Secant Cotangent

Trigonometric Ratios:

$\sin\Theta = \frac{\quad}{\quad}$	$\cos\Theta = \frac{\quad}{\quad}$	$\tan\Theta = \frac{\quad}{\quad}$
$\csc\Theta = \frac{\quad}{\quad}$	$\sec\Theta = \frac{\quad}{\quad}$	$\cot\Theta = \frac{\quad}{\quad}$

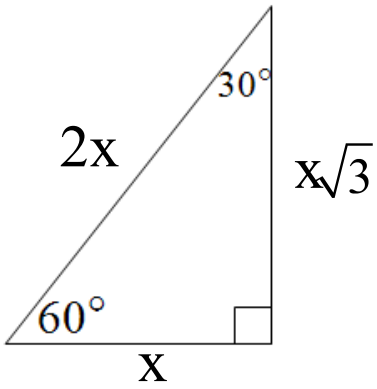
Notice Reciprocal Relationships

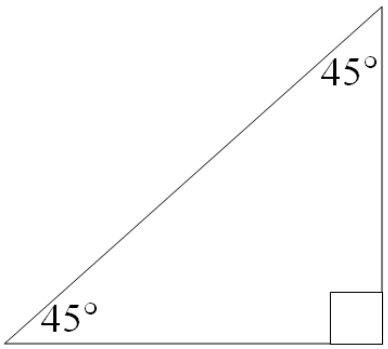
Find the six trigonometric functions for angle G



sin G = ____	cos G = ____	tan G = ____
csc [redacted]G = ____	[redacted]G = ____ sec	cot G = ____

If $\tan A = \frac{5}{3}$, find the value of csc A

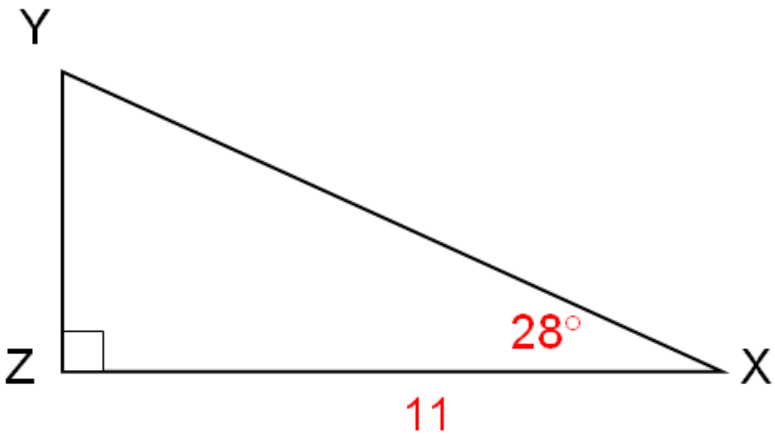




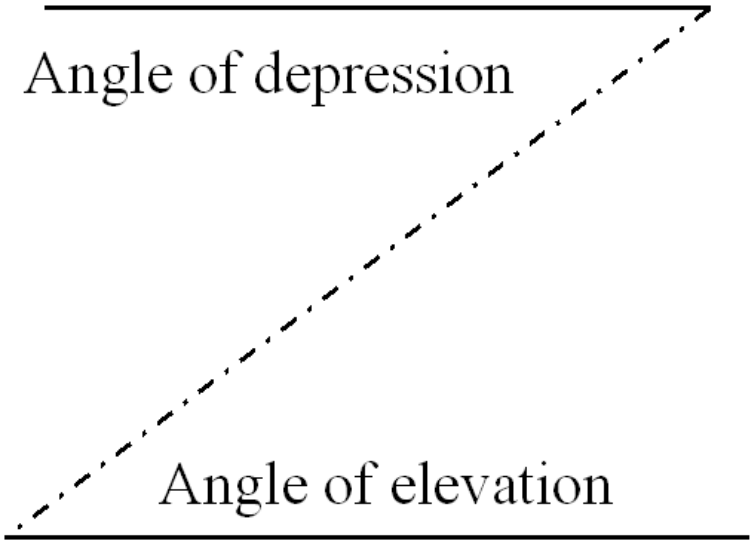
θ	sinθ	cosθ	tanθ	cscθ	secθ	cotθ
30°						
45°						
60°						

Solve a Triangle

Use trigonometric ratios to solve ΔXYZ



Set up an equation using soh, cah or toa



A ski run has an angle of elevation of 15.7° and a vertical drop of 1800 feet. Estimate the length of this run.

Step 1 - Draw a picture, label
Step 2 - Write an equation for the problem
Step 3 - Solve the equation, check your answer