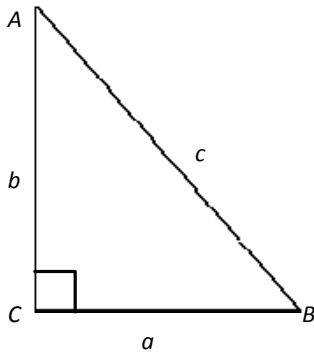


Right Triangle Trigonometry



Definitions of Trigonometric Functions

"sine" $\sin \angle = \frac{\textit{opposite}}{\textit{hypotenuse}}$

"cosecant" $\csc \angle = \frac{\textit{hypotenuse}}{\textit{opposite}}$

"cosine" $\cos \angle = \frac{\textit{adjacent}}{\textit{hypotenuse}}$

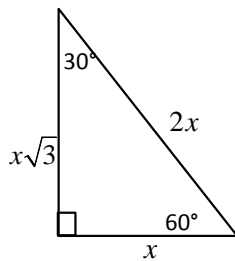
"secant" $\sec \angle = \frac{\textit{hypotenuse}}{\textit{adjacent}}$

"tangent" $\tan \angle = \frac{\textit{opposite}}{\textit{adjacent}}$

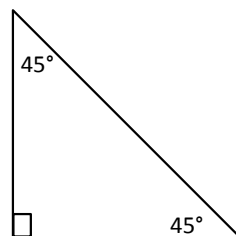
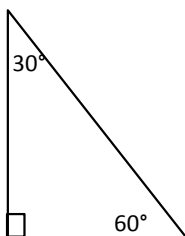
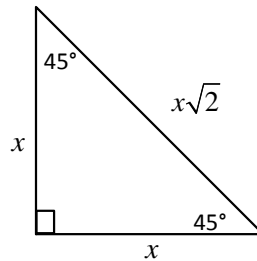
"cotangent" $\cot \angle = \frac{\textit{adjacent}}{\textit{opposite}}$

Special Right Triangles

30° - 60° - 90°

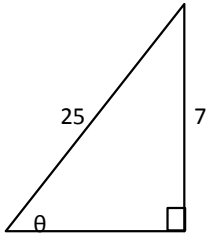


45° - 45° - 90°

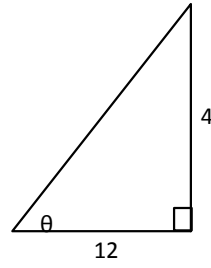


1. Find the exact values of the six trigonometric functions of the angle θ .

a)



b)



2. Find the exact values of the five remaining trigonometric functions of the angle θ .

a) $\cos \theta = \frac{3}{4}$

b) $\sin \theta = \frac{\sqrt{2}}{4}$

c) $\cot \theta = 6$

3. Evaluate each trigonometric function.

a) $\cos 60^\circ$

b) $\sin \frac{\pi}{4}$

c) $\cot \frac{\pi}{3}$

4. Find the value of θ in degrees ($0^\circ < \theta < 90^\circ$) and radians ($0 < \theta < \frac{\pi}{2}$).

a) $\sin \theta = \frac{\sqrt{3}}{2}$

b) $\cos \theta = \frac{\sqrt{2}}{2}$

c) $\sec \theta = \frac{2\sqrt{3}}{3}$

5. Find the missing sides of the triangle.

