

Trig Values by Quadrant

The cosine and sine are defined by the ordered pair (x, y) where x coordinate represents the cosine, the y coordinate represents the sine. As an ordered pair, that's (cosine, sine)

Procedure

1. Determine the quadrant of the angle
2. Find the reference angle
3. Determine the sign of that angle

Example Find the $\sin 120^\circ$ and $\cos 120^\circ$

120° is in second quadrant,

The cosine is negative, the sine is positive

Reference angle is 60° , $\cos 60^\circ = \frac{1}{2}$, $\sin 60^\circ = \frac{\sqrt{3}}{2}$

$\therefore \rightarrow \cos 120^\circ = -\frac{1}{2}$ and the $\sin 120^\circ = \frac{\sqrt{3}}{2}$

1. Find the value of the sin, cos and tan of an angle with measure 120°
2. Find the value of the sin, cos and tan of an angle with measure 225°
3. Find the value of the sin, cos, and tan of an angle with measure 300°
4. Find the value of the sin, cos and tan of an angle with measure $3\pi/4$
5. Find the value of the sin, cos and tan of an angle with measure $11\pi/6$
6. Find the value of the sin, cos and tan of an angle with measure $4\pi/3$
7. Find the value of the csc, sec and cot of an angle with measure $3\pi/4$
8. Find the value of the csc, sec and cot of an angle with measure $7\pi/6$
9. Find the value of the csc, sec and cot of an angle with measure $7\pi/4$
10. Find the value of the sin, cos, sec, tan and cot of an angle with measure 90°