example: \( \cos \frac{\pi}{2} - \csc \left( \frac{\pi}{2} \right) \)

find exact value

\( \cos \frac{\pi}{2} = 0 \)

\( \csc = \frac{1}{\sin \frac{\pi}{2}} = \frac{1}{1} = -1 \)

\[ 0 - (-1) = 1 \]

\( \cos \frac{\pi}{2} + \csc \frac{\pi}{2} \)

\[ 0 + \frac{1}{1} = 1 \]

\[ y = \tan(2x) - 2 \sin(3 \pi x) \]

\( T = \frac{2\pi}{\omega} \)

\[ T = \frac{2\pi}{3\pi} = \frac{2}{3} \]
\[ y = 4 \tan(2x) \]

\[ \tan A = y \]

\[ T = \frac{\pi}{\omega} \]

\[ T = \frac{\pi}{2} \]

\[ \cos \theta = -\frac{3}{5} \]

\[ \cos^2 \theta + \sin^2 \theta = 1 \]

\[ \sin \theta = 1 - \frac{9}{25} = \frac{16}{25} = \frac{4}{5} \]

\[ \tan \theta = -\frac{4/5}{-3/5} = \frac{4}{3} \]

\[ \sec \theta = \frac{1}{\cos \theta} = -\frac{5}{3} \]

\[ \csc \theta = \frac{1}{\sin \theta} = -\frac{5}{4} \]

\[ \cot \theta = \frac{1}{\tan \theta} = \frac{3}{4} \]
\[
\tan \theta = \frac{a}{b} = \frac{3}{\sqrt{3}} = \sqrt{3} = \tan 60°
\]

\[\sqrt{3} + 3 = a\]
\[2 + 0 = a\]
\[2\sqrt{3} = a\]
\[a = \sqrt{12} = 2\sqrt{3}\]

**EX:** Find two negative, positive angles \((\pm \theta)\) in radians for the point \((-\frac{1}{2}, \frac{\sqrt{3}}{2})\).
Example: There are 36 km from the highway one see after trucks passed. The angle $\theta$ between highway & line of the observation is measured.

\[ \theta = 15^\circ \]

How fast truck traveling?

\[ \tan 15^\circ = \frac{30}{d} \]

\[ d = \frac{30}{\tan 15^\circ} \]