

Using Trigonometric Ratios to Solve for Angles

Example 1

Suppose that $\sin \theta = \frac{3}{4}$. Solve for angle θ (to the nearest degree). How many answers are there?

Example 2

Let $\cos \theta = \frac{-1}{2}$. Find θ (to the nearest degree).

Example 3

Let $\tan \theta = 0.3640$. Solve for θ .

Example 4

Let $\sin \theta = 0.8910$. Solve for θ if $90^\circ < \theta < 180^\circ$.

Coterminal angles are angles that share the same terminal arm when drawn in standard position.

Non-coterminal angles are angles that do not share the same terminal arm when drawn in standard position.

This term is used in your textbook quite a lot.

Example 5

Find a 2 non-coterminal values for θ such that $\tan \theta = 0$.

Special Angles

How can we determine the value of the $\sin 90^\circ$?

Poor Reasoning...

Better Reasoning...

Even Better...

How can we determine the value of the $\sin 270^\circ$?

Poor Reasoning...

Better Reasoning...

Even Better...

What is the value of $\tan 90^\circ$?