Precalculus

Lesson 7.2: The Inverse Trigonometric Functions (continued)

Mrs. Snow, Instructor

Composing a Trig Function

What???? Evaluate a trig function involving inverse functions.

Find the exact value of : $\sin\left(tan^{-1}\frac{1}{2}\right)$	1. Let θ equal the inverse function 2. By definition: $\theta = tan^{-1}\frac{1}{2} \ \therefore \tan\theta = \frac{1}{2}$ 3. Set up a triangle in which $\tan\theta = \frac{1}{2}$
$\cos\left[sin^{-1}\left(-\frac{1}{3}\right)\right]$	$\tan\left[cos^{-1}\left(-\frac{1}{3}\right)\right]$
$cos^{-1}\left[\tan\left(-\frac{\pi}{4}\right)\right]$	

Write a Trigonometric expression as an Algebraic Expression:

Look back to the first example. What is the first step?

$$\sin(tan^{-1}\, u)$$