Algebra II

12-4
Values of Trigonometric Functions

Find each function value to four significant figures.

1) tan 15.2° = *0.2717*

What does this mean? This is the opposite divided by the adjacent in a right triangle.

→ calculators can't do sec, csc, cot. Not $\cos^{-1}$

13) cos 52°43'

cos 52.71̄6̄

$\frac{43}{60}$

= .6058

⟦° ' "⟧

17) sec 111.3°

$\frac{1}{\cos(111.3°)}$ = -2.753

⟦$\frac{1}{x}$⟧ ⟦x^{-1}⟧

Find the measure of the acute angle θ to the nearest tenth of a degree.

25) sin θ = 0.3400

$\theta = \sin^{-1}(.3400)$

$\theta = 19.9°$

⟦sin⟧ ⟦cos⟧ ⟦tan⟧

use when we know an angle.

To find an angle, use $\sin^{-1}$ $\cos^{-1}$ $\tan^{-1}$

Find the measure of the acute angle θ to the nearest minute.

31) cos θ = 0.8621

$\theta = \cos^{-1}(.8621)$

$\theta = 30.496...$ ▸DMS
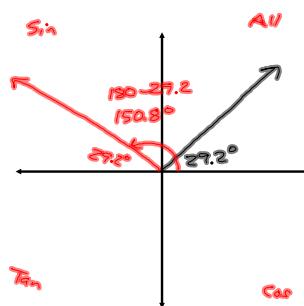
$\theta = 30° 26' 48.5"$

≈ 30° 27'

⟦° ' "⟧

Find the measures of two angles between 0° and 360° with the given function value. Give answers to the nearest tenth of a degree.

37) sin θ = 0.4875

$\theta = \sin^{-1}(0.4875)$

$\theta = 29.2°$

or

$\theta = 150.8°$

Sin   All

180-29.2
150.8°

29.2°   29.2°

Tan   Cos