Inverse Trig - 1

Note Title 11/29/2010

Example

$$\sin^{-1}\left(\frac{\sqrt{3}}{2}\right) = ?$$

Want angle θ whose sine value is $\frac{\sqrt{3}}{2}$.

i.e. $\sin\theta = \frac{\sqrt{3}}{2}$

know that $\sin\left(\frac{\pi}{3}\right) = \frac{\sqrt{3}}{2}$

So $\boxed{\sin^{-1}\left(\frac{\sqrt{3}}{2}\right) = \frac{\pi}{3}}$

b) $\arcsin\left(-\frac{1}{2}\right) = -\frac{\pi}{6}$

because $\sin\left(-\frac{\pi}{6}\right) = -\sin\frac{\pi}{6}$

$= -\frac{1}{2}$