$\sqrt{\cos^2\theta} = |\cos\theta|$

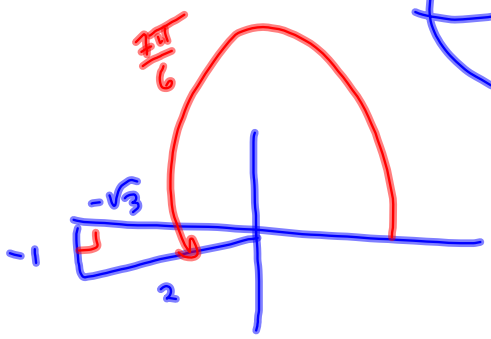
$\sqrt{\sin^2\theta} = |\sin\theta|$

If $\pi \le \theta \le 2\pi$, then $|\sin\theta| =$

sign of sin.

one is negative, so $|\sin\theta| = -\sin\theta$

one is positive



$\sin\left(\frac{7\pi}{6}\right) = -\frac{1}{2}$

$\left|\sin\left(\frac{7\pi}{6}\right)\right| = \left|-\frac{1}{2}\right| = \frac{1}{2} = -\left(-\frac{1}{2}\right)$

$= -\sin\left(\frac{7\pi}{6}\right)$

$\sin(x+y) = \sin x \cos y + \sin y \cos x$

$\cos(x+y) = \cos x \cos y - \sin x \sin y$

$\sin(x-y)$ } sine is odd

$\cos(x-y)$ } cosine is even

$\sin(x+(-y))$

$\cos(x+(-y))$