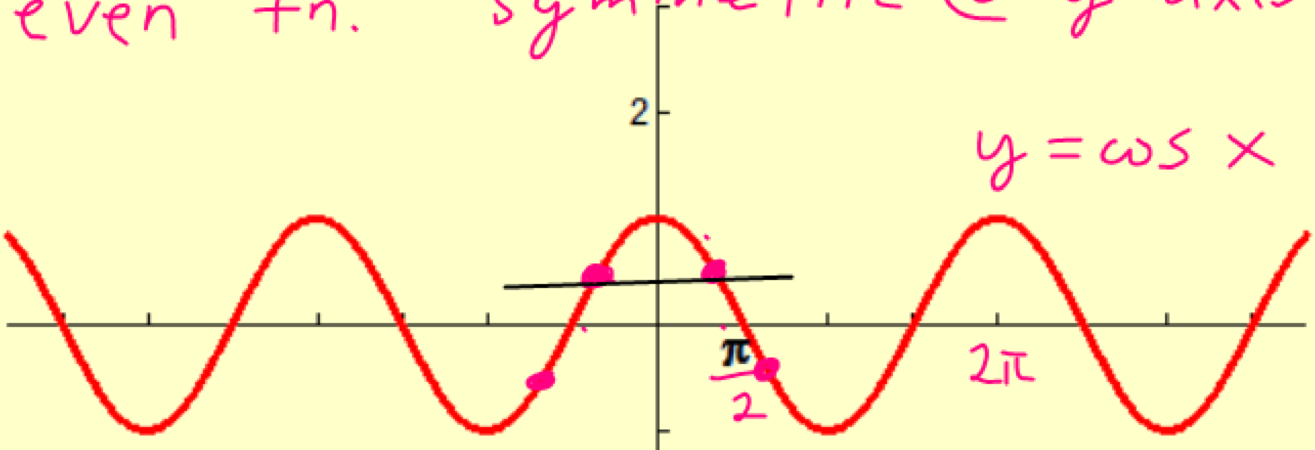
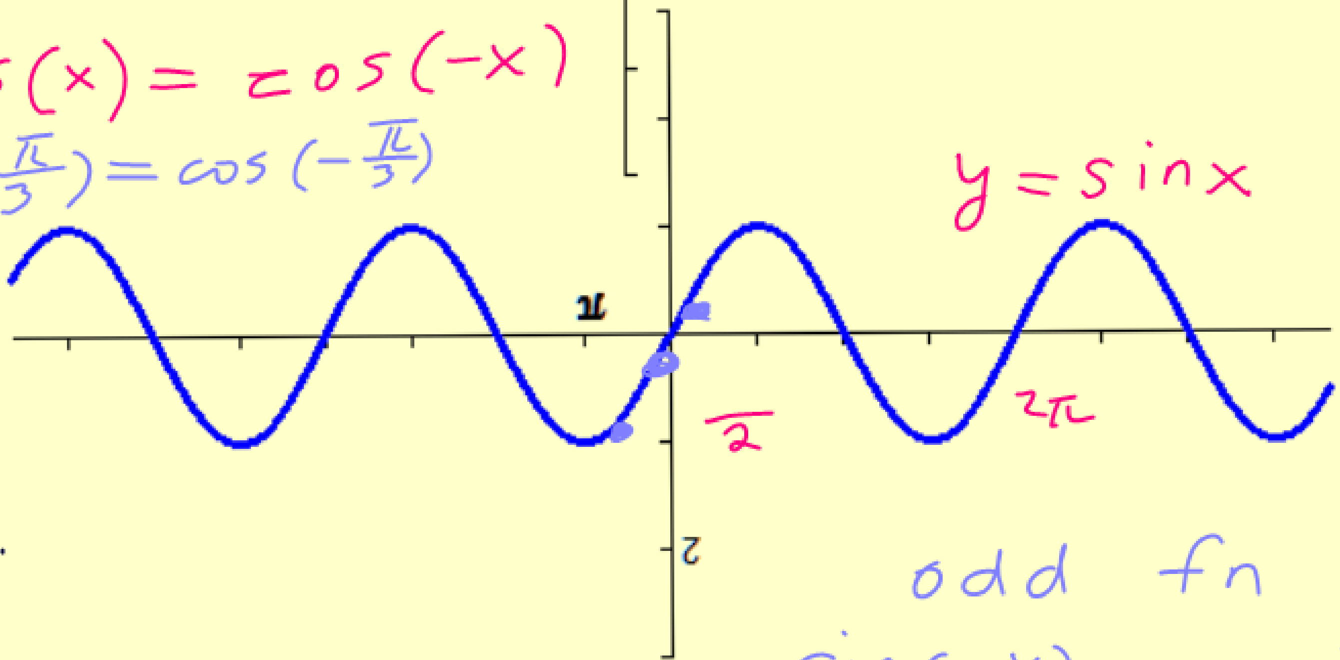
Turn to page 240

even fn. symmetric @ y-axis



$\cos(x) = \cos(-x)$

$\cos(\frac{\pi}{3}) = \cos(-\frac{\pi}{3})$

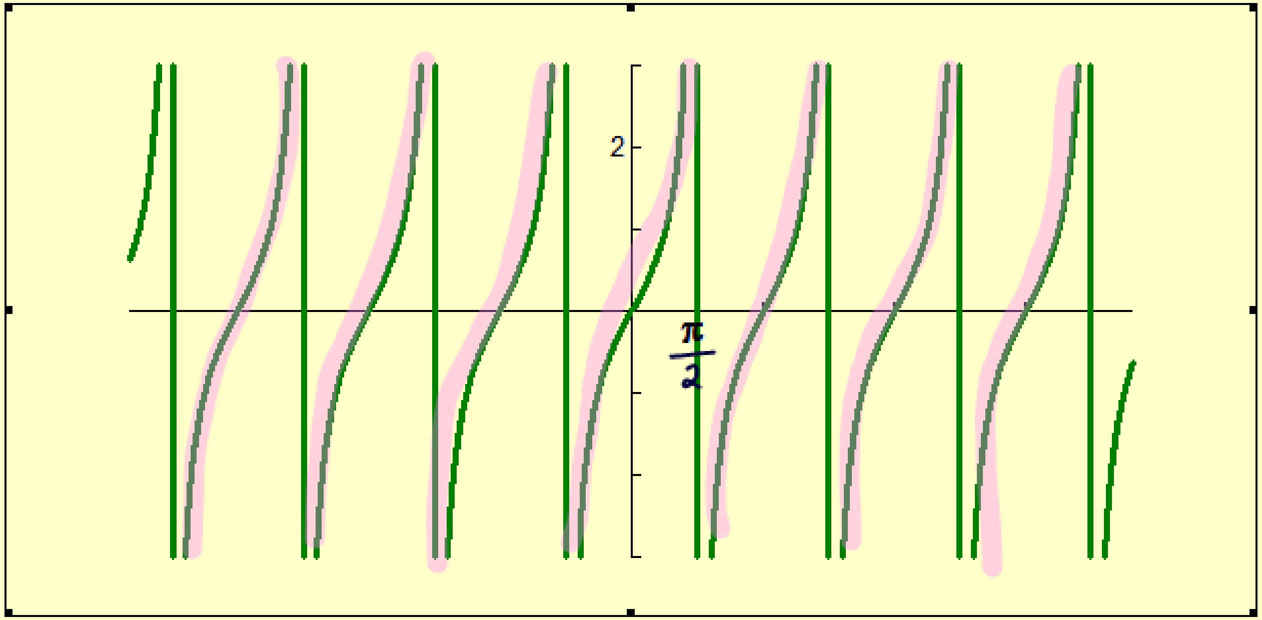


odd fn

$\sin(-x) = -\sin(x)$

$\sin(-\pi/3) = -\sin(\pi/3)$

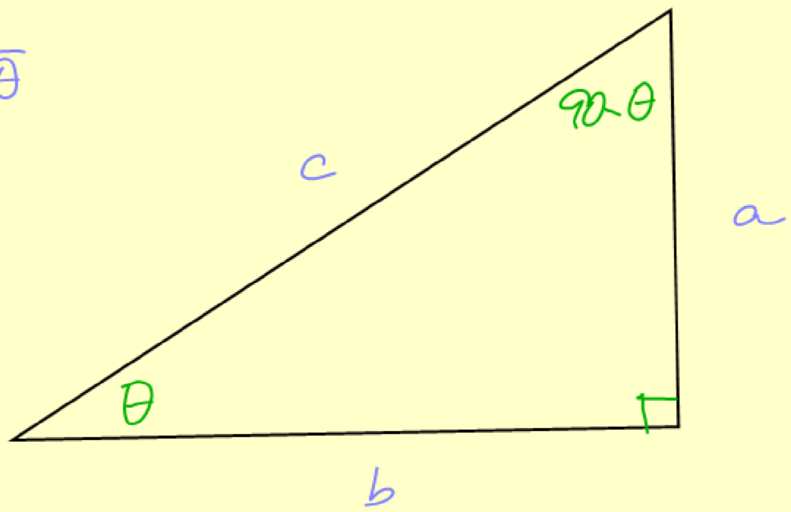
$y = \tan(x)$



odd so

$\tan(-x) = -\tan(x)$

$$\cos\theta = \frac{1}{\sec\theta}$$



$$\cos\theta = \frac{b}{c} = \sin(90-\theta)$$

$$\cos\theta = \sin\left(\tfrac{\pi}{2}-\theta\right)$$

$$\sin\theta = \frac{a}{c} = \cos(90-\theta)$$

$$\sin\theta = \cos\left(\tfrac{\pi}{2}-\theta\right)$$

$$\tan\theta = \frac{a}{b} = \cot(90-\theta)$$

$$\tan\theta = \cot\left(\tfrac{\pi}{2}-\theta\right)$$

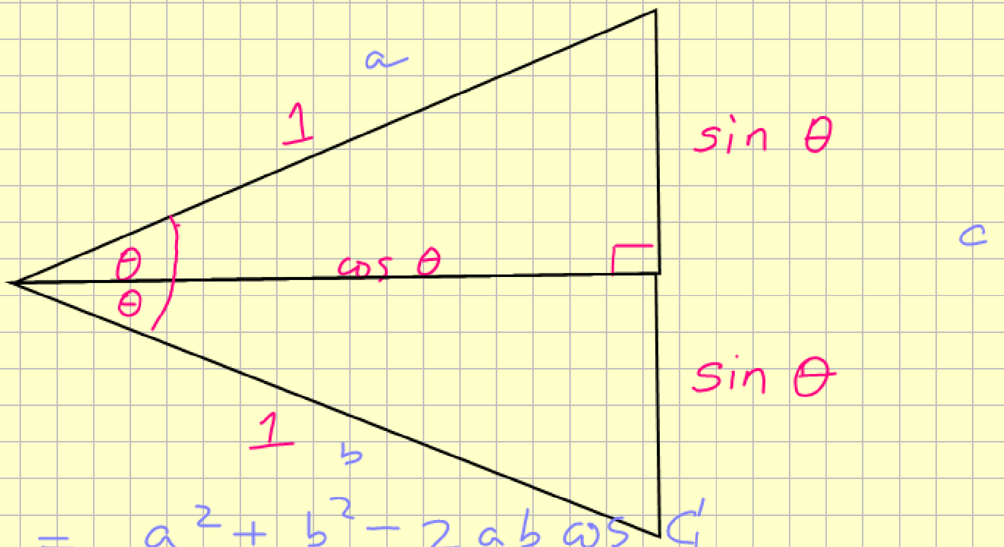
1 radian

π radians $\approx$ 3.14 radians

$\frac{\pi}{2}$ radias $\approx$ 1.57 radians

Double Angle Formula for Cosine

$$\cos(2\theta) = 1 - 2\sin^2\theta$$



$$c^2 = a^2 + b^2 - 2ab\cos C$$

$$(2\sin\theta)^2 = 1^2 + 1^2 - 2(1)(1)\cos(2\theta)$$

$$4\sin^2\theta = 2 - 2\cos(2\theta)$$

$$4\sin^2\theta - 2 = -2\cos(2\theta)$$

$$-2\sin^2\theta + 1 = \cos(2\theta)$$

$$\boxed{\cos(2\theta) = 1 - 2\sin^2\theta}$$

$$\cos(2\theta) = 1 - 2\sin^2\theta$$

$$= 1 - 2(1 - \cos^2\theta)$$

$$= 1 - 2 + 2\cos^2\theta$$

$$= 2\cos^2\theta - 1$$

$$\cos(2\theta) = 2\cos^2\theta - 1$$