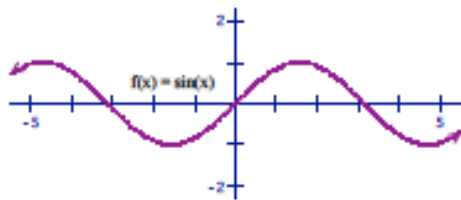| **Sine**	**Cosine**	**Tangent**

$y = \sin\theta$

domain is an angle
range is a real number

$$\sin\theta = \frac{opposite}{hypotenuse}$$

$\sin\theta$ is the *y*-coordinate of a point on the unit circle formed by the angle θ
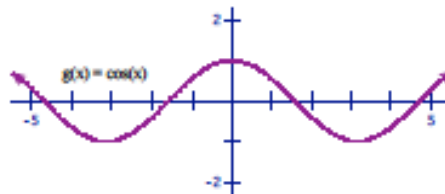
graph goes through the origin and oscillates

$y = \cos\theta$

domain is an angle
range is a real number

$$\cos\theta = \frac{adjacent}{hypotenuse}$$

$\cos\theta$ is the *x*-coordinate of a point on the unit circle formed by the angle θ

graph goes through (0, 1) and oscillates

$y = \tan\theta$

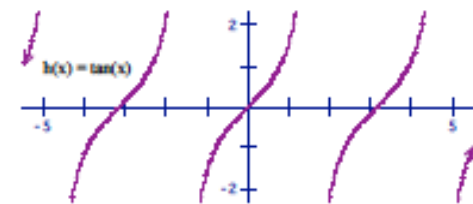domain is an angle
range is a real number

domain issues: $\cos\theta \neq 0$

$$\tan\theta = \frac{opposite}{adjacent}$$

$\tan\theta$ is the ratio of the *y* and *x* coordinates of a point on the unit circle formed by the angle θ

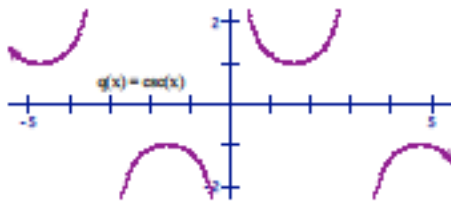graph has vertical asymptotes at odd multiples of $\dfrac{\pi}{2}$

f(x) = sin(x)

g(x) = cos(x)

h(x) = tan(x)

Cotangent	**Secant**	**Cosecant**
$y = \cot\theta$	$y = \sec\theta$	$y = \csc\theta$
domain is an angle range is a real number	domain is an angle range is a real number	domain is an angle range is a real number
domain issues: $\sin\theta \neq 0$	domain issues: $\cos\theta \neq 0$	domain issues: $\sin\theta \neq 0$
$\cot\theta = \dfrac{1}{\tan\theta} = \dfrac{adjacent}{opposite}$	$\sec\theta = \dfrac{1}{\cos\theta} = \dfrac{hypotneuse}{adjacent}$	$\csc\theta = \dfrac{1}{\sin\theta} = \dfrac{hypotenuse}{opposite}$
$\cot\theta$ is the reciprocal of $\tan\theta$	$\sec\theta$ is the reciprocal of $\cos\theta$	$y = \csc\theta$ is the reciprocal of $\sin\theta$
graph has vertical asymptotes at multiples of π	graph has vertical asymptotes at odd multiples of $\dfrac{\pi}{2}$	graph has vertical asymptotes at multiples of π

$g(x) = \csc(x)$

$r(x) = \sec(x)$

$s(x) = \cot(x)$