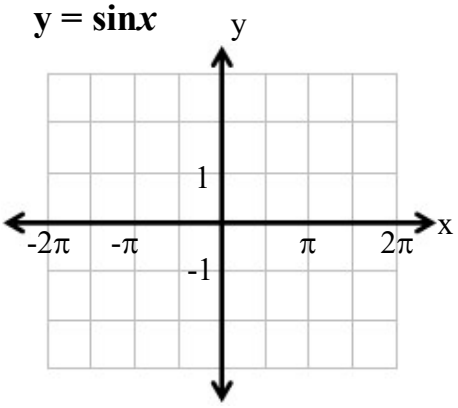
HONORS TRIG/PRECALCULUS: CH.5 **NAME:** **PER:**

SKETCH A GRAPH FOR THE SIX TRIG FUNCTIONS USING 5 "KEY" VALUES FOR EACH PERIOD.

y = sin*x*



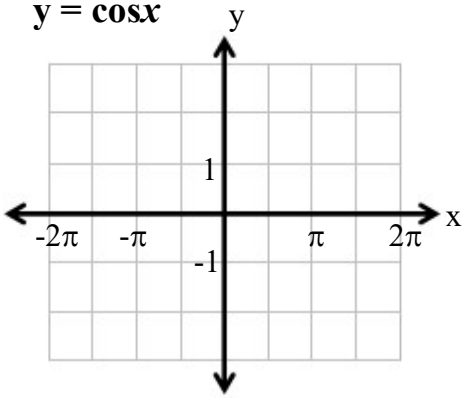
Domain:

Range:

Period:

x-intercepts:

y = cos*x*



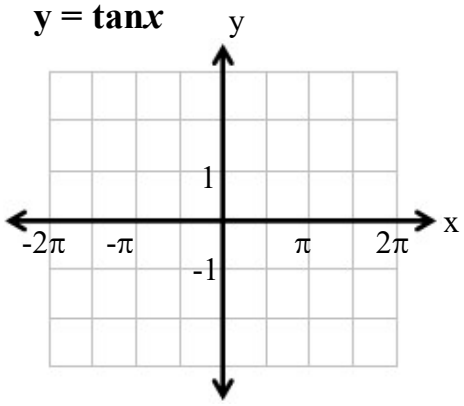
Domain:

Range:

Period:

x-intercepts:

y = tan*x*



Domain:

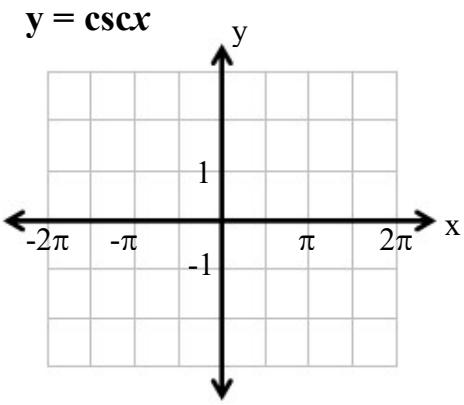
Range:

Period:

Asymptotes:

---

y = csc*x*



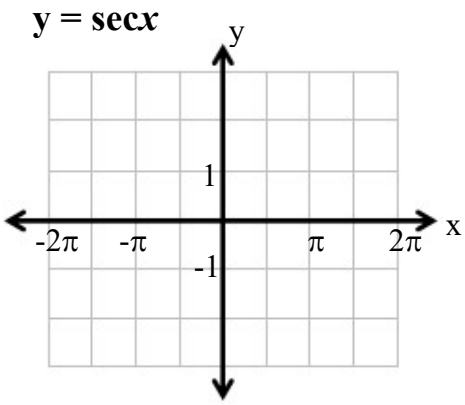
Domain:

Range:

Period:

x-intercepts:

y = sec*x*



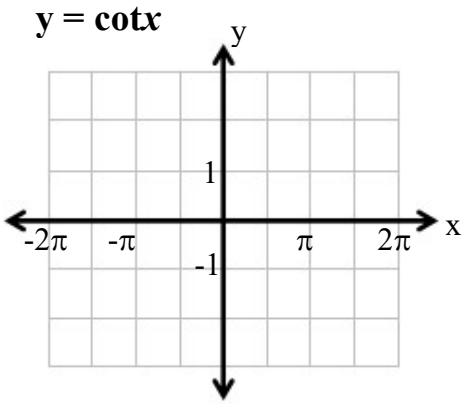
Domain:

Range:

Period:

x-intercepts:

y = cot*x*



Domain:

Range:

Period:

Asymptotes:

NOTE: When applying a horizontal (phase) shift, the key points and asymptotes will move left or right. The asymptotes will also get closer together or further apart as the period changes.

OVER→

Notes 5-4: Graphing tan/cot and sec/csc

Tangent (parent) graph:_____, passes through origin.

Cotangent (parent graph: _____, asymptote at origin.

The reciprocal of zero is an _____ value.

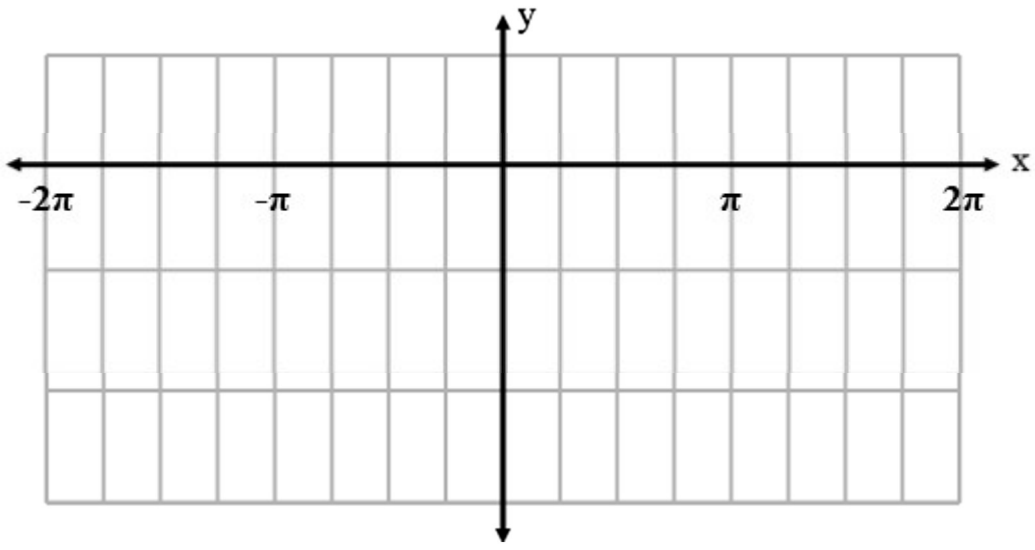
The reciprocal of an undefined value is _____.

A _____ will move key points and the asymptotes left/right. Asymptotes get closer together or further apart as the _____changes.

A _____ value will reflect (flip) the graph across the x-axis.

factored/graphing form:	**factored/graphing form:**
$y = tan\,k(x - b) + h$ **$y = cot\,k(x - b) + h$**	**$y = sec\,k(x - b) + h$** **$y = csc\,k(x - b) + h$**
period = , k > 0	**period = , k > 0**
b = horizontal shift **h = vertical shift** **amplitude = _____** ***(key points just stretch or get compacted by A)***	**b = horizontal shift** **h = vertical shift** **amplitude = _____** ***(key points just stretch or get compacted by A)***

Example:
$y = \sec(2x + \pi) - 1$



OVER→