

Trig Graphing WS
Secant Graphs

Pos Cos \Rightarrow max, axis, min, axis, max

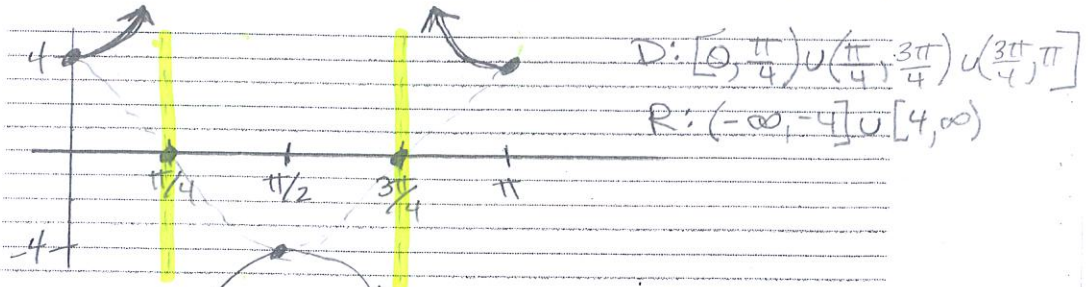
Name key

* graph cos then sec

Graph one complete period for each function and give the domain and range (in interval notation) of that period.

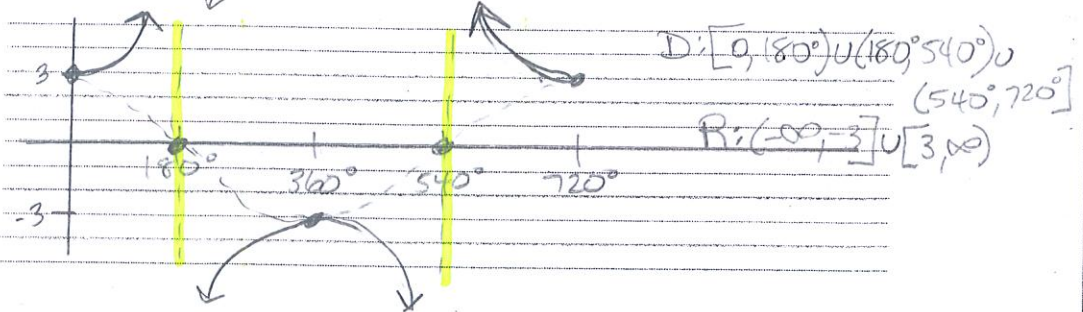
1) $y = 4 \sec 2x$

no vs
amp = 4
 $2x = 0$ $2x = 2\pi$
 $x = 0$ $x = \pi$
period = π



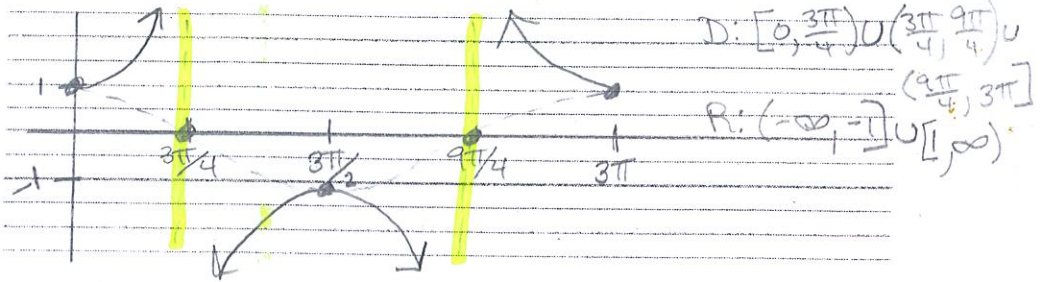
2) $y = 3 \sec \frac{\theta}{2}$

no vs
amp = 3
 $\frac{\theta}{2} = 0$ $\frac{\theta}{2} = 360^\circ$
 $\theta = 0^\circ$ $\theta = 720^\circ$
Period = 720°



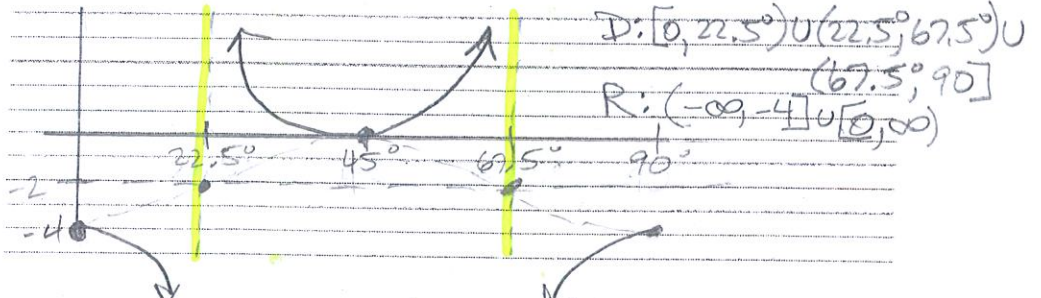
3) $y = \sec \frac{2x}{3}$

no vs
amp = 1
 $\frac{2}{3}x = 0$ $\frac{2}{3}x = 2\pi$
 $x = 0$ $x = 3\pi$
Period = 3π



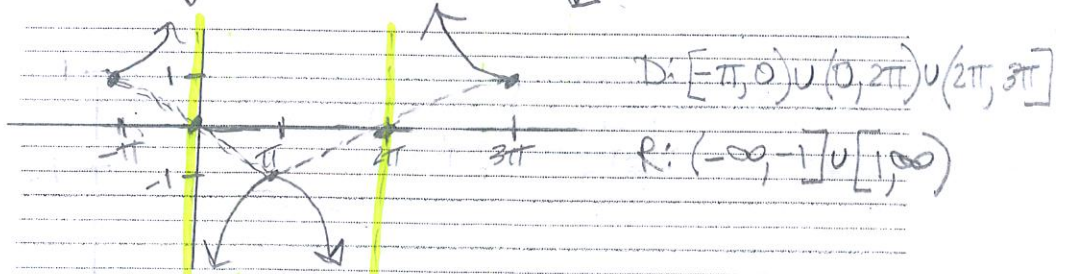
4) $y = -2 \sec 4\theta - 2$

vs = -2
reflected over x-axis
amp = 2
 $4\theta = 0$ $4\theta = 360^\circ$
 $\theta = 0^\circ$ $\theta = 90^\circ$
Period = 90°



5) $y = \sec(\frac{x}{2} + \frac{\pi}{2})$

no vs
amp = 1
 $\frac{x}{2} + \frac{\pi}{2} = 0$ $\frac{x}{2} + \frac{\pi}{2} = 2\pi$



(2) $\frac{x}{2} = -\frac{\pi}{2}$ (2) $\frac{x}{2} = \frac{4\pi}{2} - \frac{\pi}{2}$

$x = -\pi$ (2) $\frac{x}{2} = \frac{3\pi}{2}$ (2)
 $x = 3\pi$

Period = $3\pi - (-\pi) = 4\pi$