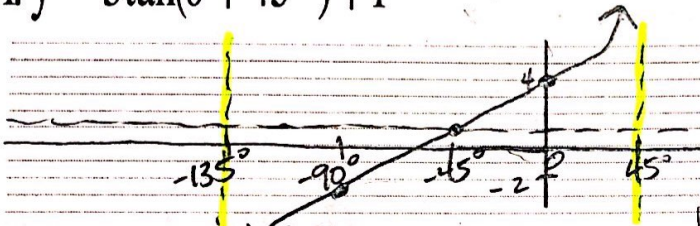


Warm-up #3:

Graph the following functions. State the period, domain and range.

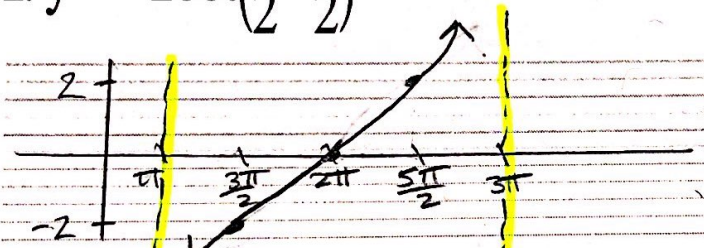
1. $y = 3\tan(\theta + 45^\circ) + 1$



- amp 3
 - vs 1
 - B5 tan
- $\theta + 45^\circ = -90^\circ \quad \theta + 45^\circ = 90^\circ$
- $\theta = -135^\circ \quad \theta = 45^\circ$

Di: $(-135^\circ; 45^\circ)$
 Ri: $(-\infty, \infty)$
 P: $45^\circ - (-135^\circ) = 180^\circ$

2. $y = -2\cot\left(\frac{x}{2} - \frac{\pi}{2}\right)$



- amp: 2
- VS: None
- neg cot

Di: $(\pi, 3\pi)$
 Ri: $(-\infty, \infty)$
 Period: $3\pi - \pi = 2\pi$

$\frac{x}{2} - \frac{\pi}{2} = 0$

$\frac{x}{2} - \frac{\pi}{2} = \pi$

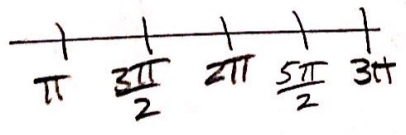
(2) $\frac{x}{2} = \frac{\pi}{2}$ (2)

$\frac{x}{2} = \frac{2\pi}{2} + \frac{\pi}{2}$

$x = \pi$

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

$x = 3\pi$



$\frac{\pi + 3\pi}{2} = \frac{4\pi}{2} = 2\pi$

$\frac{\pi + 2\pi}{2} = \frac{3\pi}{2}$

$\frac{2\pi + 3\pi}{2} = \frac{5\pi}{2}$