

PreCalculus – Worksheet

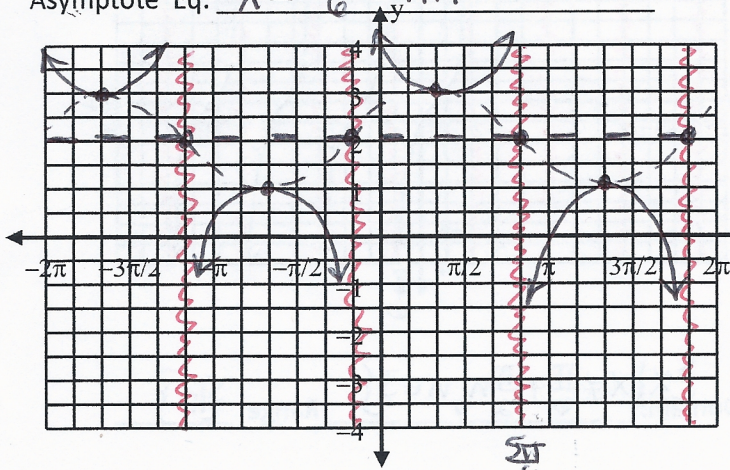
Quiz Review – Graphing sec, csc, tan, cot

1.)  $y = \csc(\theta + \frac{\pi}{6}) + 2$

b = 1 Period:  $2\pi$  Phase Shift:  $\frac{\pi}{6}$  ←

V. Shift:  $2 \uparrow$  2 asym: \_\_\_\_\_

Asymptote Eq:  $X = \frac{5\pi}{6} + \pi n$



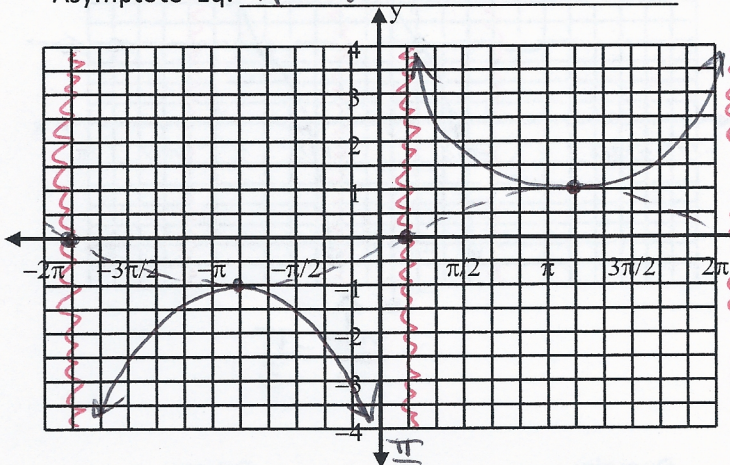
Domain:  $\{x | x \neq \frac{5\pi}{6} + \pi n, n \in \mathbb{Z}\}$  Range:  $(-\infty, 1] \cup [3, \infty)$

3.)  $y = \csc \frac{1}{2}(\theta - \frac{\pi}{6})$

b =  $\frac{1}{2}$  Period:  $\frac{2\pi}{1/2} = 4\pi$  Phase Shift:  $\frac{\pi}{6}$  →

V. Shift: none 2 asym: \_\_\_\_\_

Asymptote Eq:  $X = \frac{\pi}{6} + 2\pi n$



Domain:  $\{x | x \neq \frac{\pi}{6} + 2\pi n, n \in \mathbb{Z}\}$  Range:  $(-\infty, -1] \cup [1, \infty)$

Name Key

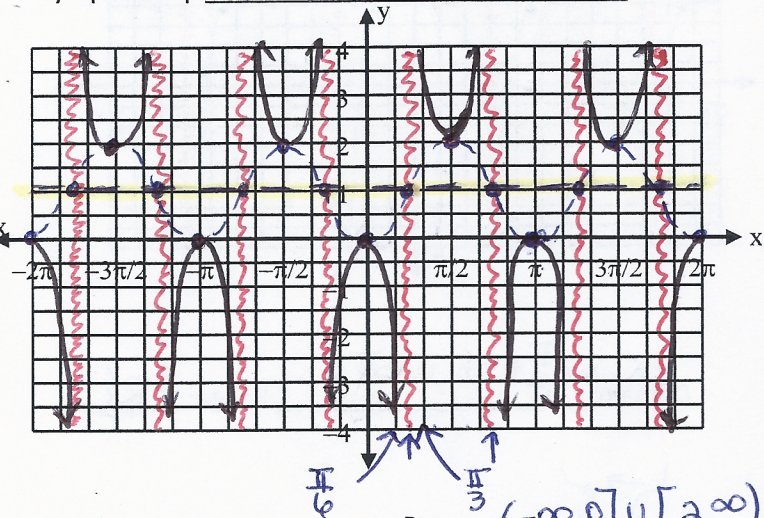
Graph the following equations and fill in the blanks.

2.)  $y = -\sec 2\theta + 1$

b = 2 Period:  $\frac{2\pi}{2} = \pi$  Phase shift: none

V. Shift:  $1 \uparrow$  2 asym: \_\_\_\_\_

Asymptote Eq:  $X = \frac{\pi}{4} + \frac{\pi}{2}n$



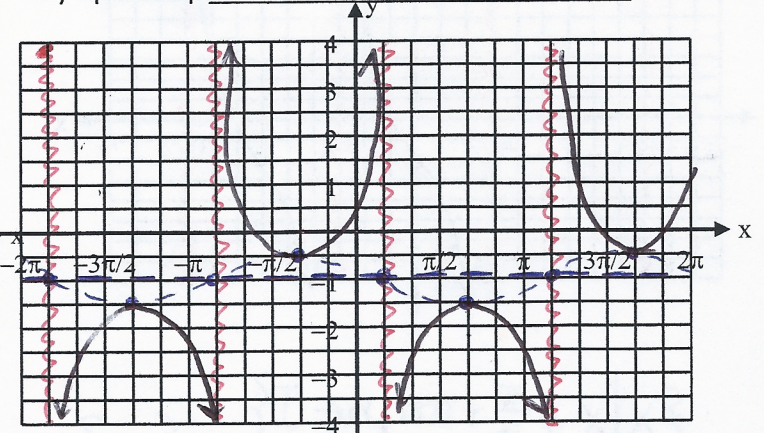
Domain: \_\_\_\_\_ Range:  $(-\infty, 0] \cup [2, \infty)$   
 $\{x | x \neq \frac{\pi}{4} + \frac{\pi}{2}n, n \in \mathbb{Z}\}$

4.)  $y = \frac{1}{2} \sec(\theta + \frac{\pi}{3}) - 1$   $y = \frac{1}{2} \cos(\theta + \frac{\pi}{3}) - 1$

b = 1 Period:  $2\pi$  Phase shift:  $\frac{\pi}{3}$  ←

V. Shift:  $1 \downarrow$  2 asym: \_\_\_\_\_

Asymptote Eq:  $X = \frac{\pi}{6} + \pi n$



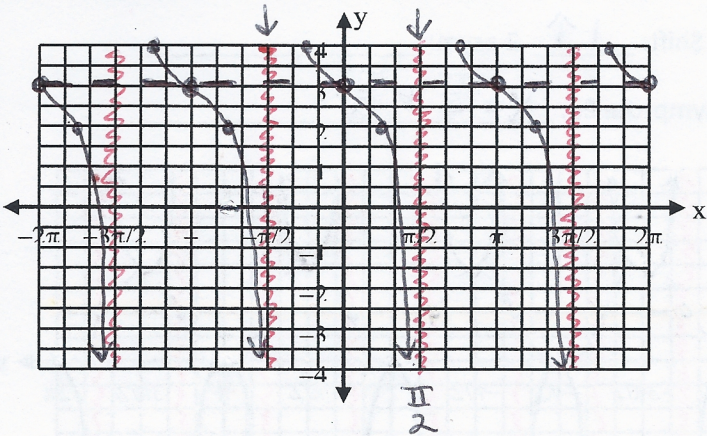
Domain: \_\_\_\_\_ Range:  $(-\infty, \frac{1}{2}] \cup [\frac{1}{2}, \infty)$   
 $\{x | x \neq \frac{\pi}{6} + \pi n, n \in \mathbb{Z}\}$

5.)  $y = -\tan \theta + 3$

b = 1 Period:  $\pi$  Phase Shift: none

V. Shift:  $3\uparrow$  2 asym: \_\_\_\_\_

Asymptote Eq:  $x = \frac{\pi}{2} + \pi n$



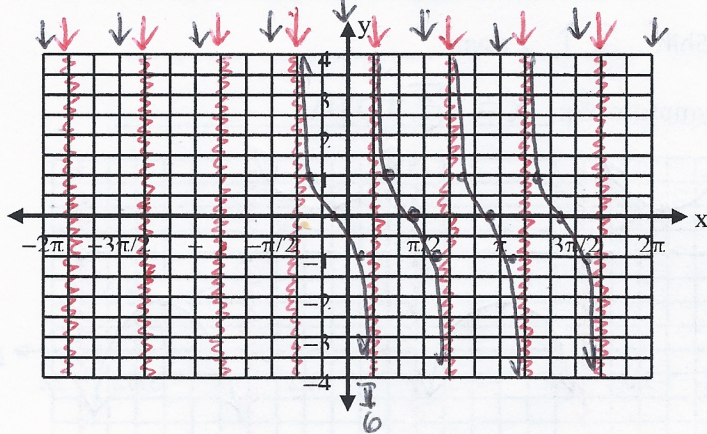
Domain:  $\{x | x \neq \frac{\pi}{2} + \pi n, n \in \mathbb{Z}\}$  Range:  $\mathbb{R}$

6.)  $y = \cot 2(\theta + \frac{\pi}{3})$

b = 2 Period:  $\frac{\pi}{2}$  Phase shift:  $\frac{\pi}{3} \leftarrow$

V. Shift: none 2 asym: \_\_\_\_\_

Asymptote Eq:  $x = \frac{\pi}{6} + \frac{\pi}{2} n$



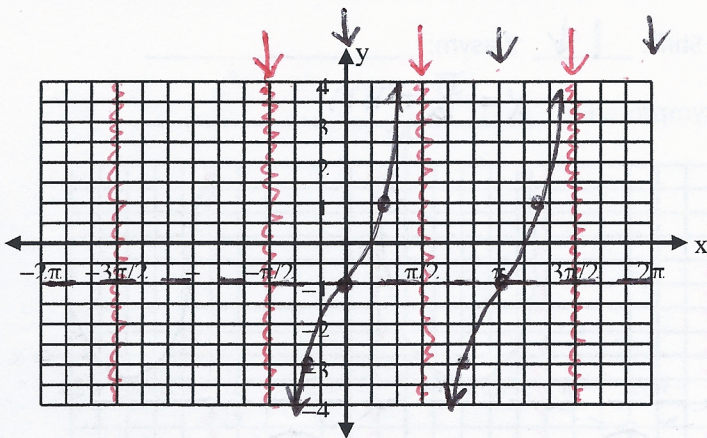
Domain:  $\{x | x \neq \frac{\pi}{6} + \frac{\pi}{2} n, n \in \mathbb{Z}\}$  Range:  $\mathbb{R}$

7.)  $y = -2 \cot(\theta + \frac{\pi}{2}) - 1$

b = 1 Period:  $\pi$  Phase Shift:  $\frac{\pi}{2} \leftarrow$

V. Shift:  $1\downarrow$  2 asym:  $\frac{17\pi}{2}$   $\frac{23\pi}{2}$

Asymptote Eq:  $x = \frac{\pi}{2} + \pi n$



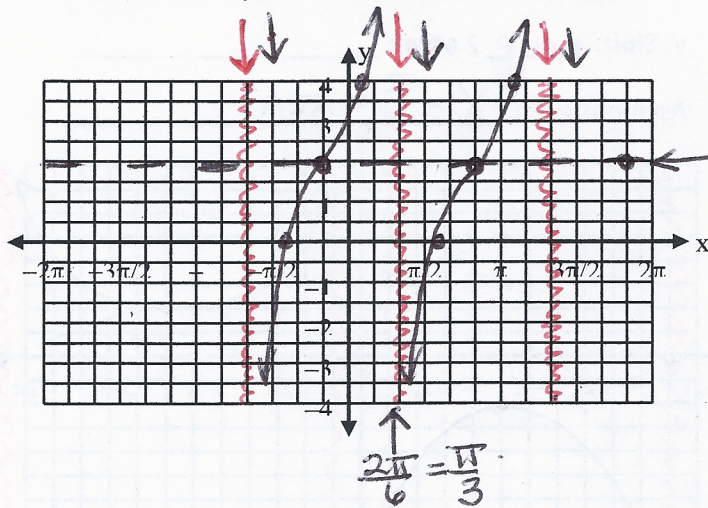
Domain:  $\{x | x \neq \frac{\pi}{2} + \pi n, n \in \mathbb{Z}\}$  Range:  $\mathbb{R}$

8.)  $y = 2 \tan(\theta + \frac{\pi}{6}) + 2$

b = 1 Period:  $\pi$  Phase shift:  $\frac{\pi}{6} \leftarrow$

V. Shift:  $2\uparrow$  2 asym: \_\_\_\_\_

Asymptote Eq:  $x = \frac{\pi}{3} + \pi n$



Domain: \_\_\_\_\_ Range: \_\_\_\_\_