College Algebra

Name: Key

8.5 – Day 2 Practice

Date: _____ Period: _____

Find the important information for **one period** of the equation.

1.) $y = \tan\frac{1}{2}x + 2$

A: DNE V.S. T2

P: $\pi/\frac{1}{2} = 2\pi$ H.S. none

D: $(-\pi, \pi)$

R: $(-\infty, \infty)$

2.) $y = -3\cot\frac{1}{4}x$

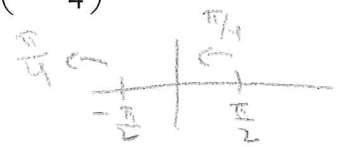
A: DNE V.S. none

P: $\pi/\frac{1}{4} = 4\pi$ H.S. none

D: $(0, 4\pi)$

R: $(-\infty, \infty)$

3.) $y = \frac{1}{2}\tan\left(x + \frac{\pi}{4}\right) + 3$



$\frac{3}{4\pi} - \frac{1}{4}$

$\frac{2\pi}{4} - \frac{\pi}{4}$

A: DNE V.S. T3

P: π H.S. π/4 ←

D: $(-\frac{3\pi}{4}, -\pi/4)$

R: $(-\infty, \infty)$

4.) $y = \tan 4x - 1$

A: DNE V.S. ↓

P: π/4 H.S. none

D: $(-\pi/8, \pi/8)$

R: $(-\infty, \infty)$

5.) $y = 2\cot\left(4x + \frac{\pi}{2}\right)$

$4(x + \frac{\pi}{8})$

$\frac{2}{8\pi} - \frac{1}{8}$

A: DNE V.S. none

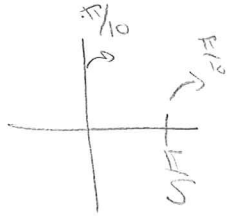
P: π/4 H.S. π/8 ←

D: $(-\pi/8, \pi/8)$

R: $(-\infty, \infty)$

6.) $y = \cot\left(5x + \frac{\pi}{2}\right) + 1$

$5(x + \frac{\pi}{10})$



A: DNE V.S. T1

P: π/5 H.S. π/10 →

D: $\frac{\pi}{10}$,

R: $(-\infty, \infty)$

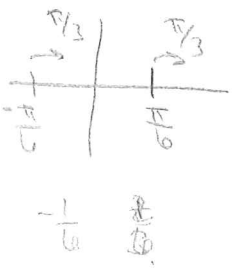
7) Which of the following x-values would contain the asymptotes for: $y = 5\tan(3x - \pi)$?

A.) $\frac{\pi}{3}, \frac{2\pi}{3}$

B.) $0, \frac{\pi}{3}$

C.) $-\frac{\pi}{6}, \frac{\pi}{6}$

D.) $\frac{5\pi}{6}, \frac{7\pi}{6}$



8) Which of the following x-values would contain the asymptotes for: $y = \tan\left(x - \frac{7\pi}{4}\right) - 3$?

A.) $-\frac{9\pi}{4}, -\frac{5\pi}{4}$

B.) $\frac{7\pi}{4}, \frac{11\pi}{4}$

C.) $-\pi, 0$

D.) $\frac{5\pi}{4}, \frac{9\pi}{4}$

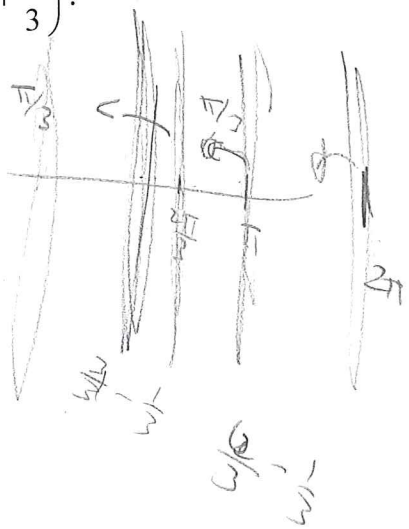
9) Which of the following x-values would contain the asymptotes for: $y = 2\cot\left(x + \frac{\pi}{3}\right)$?

A.) $\frac{2\pi}{3}, \frac{5\pi}{3}$

B.) $0, \pi$

C.) $-\frac{\pi}{2}, \frac{\pi}{2}$

D.) $-\frac{5\pi}{6}, \frac{\pi}{6}$



10.) What is the domain, for one period, of the graph: $y = 4\cot(4x - \pi) + 6$?

11.) What is the domain, for one period, of the graph: $y = \frac{1}{3}\tan 3\left(x + \frac{\pi}{6}\right)$?