King Fahd University of Petroleum and Minerals
Prep-Year Math Program
Math 002 - Term 132
Recitation (6.5 and 6.6)

Question 1: The number of vertical asymptotes of $y = \dfrac{3}{2}\csc\left(x - \dfrac{\pi}{2}\right)$ over the

interval $\left(-\dfrac{3\pi}{2}, \dfrac{5\pi}{2}\right)$ is:

A) 3   B) 2   C) 4   D) 1   B) 5

Question 2: If $x = a$, $x = b$ and $x = c$ are the vertical asymptotes of

$y = 1 - \dfrac{1}{2}\csc\left(x - \dfrac{3\pi}{4}\right)$, in the interval $[0, 3\pi]$ then $a + b + c =$

A) $\dfrac{21\pi}{4}$

B) $\dfrac{9\pi}{2}$

C) 5π

D) $\dfrac{17\pi}{4}$

E) $\dfrac{15\pi}{2}$

Question 3:

If the graph of the function $y = \dfrac{3}{2}\tan(ax + b)$, where $a > 0$, has a period of $\dfrac{\pi}{2}$

and phase shift $-\dfrac{\pi}{8}$, then $4b - a\pi =$

A) $-\pi$ B) -3π C) π D) 3π E)   0

Question 4 The graph below can be represented by the trigonometric function

(A) $f(x) = -2\tan\left(\dfrac{\pi}{4}x + \dfrac{\pi}{4}\right)$

(B) $f(x) = 2\tan\left(\dfrac{\pi}{4}x + \dfrac{\pi}{4}\right)$

(C) $f(x) = 2\cot\left(\dfrac{\pi}{4}x + 1\right)$

(D) $f(x) = -2\tan(x + 1)$

(E) $f(x) = 2\cot(x + 1)$