Tangent Functions Assignment

1. Over the interval [0, 2π], what are the values for which the basic tangent function is undefined?

A) 0 and 2π

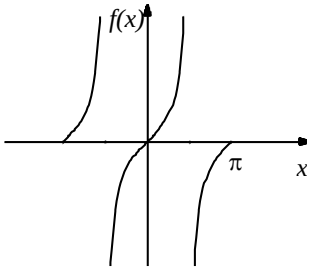
B) $\frac{\pi}{2}$ and $\frac{3\pi}{2}$

C) π

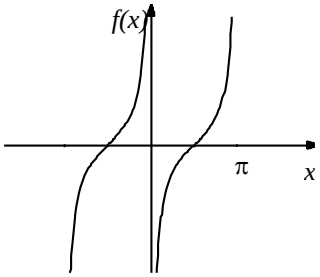
D) 0, π and 2π

2. Which one of the following graphs represents the basic tangent function for the interval]-π, π[?

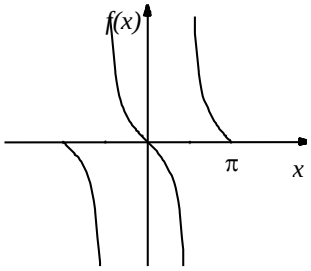
A)



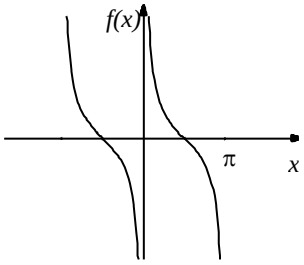
C)



B)

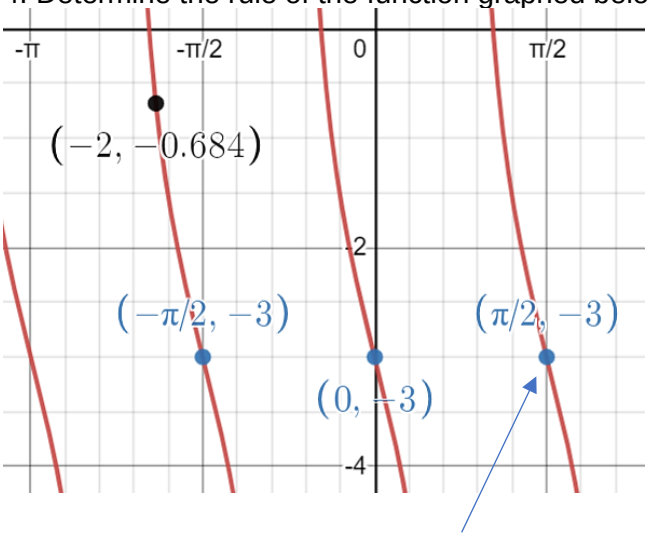


D)



3. Given $g(x) = 2\tan 4\left(x - \frac{\pi}{2}\right)$ state the equation(s) of the asymptote(s) over $0 \le x \le \pi$.

4. Determine the rule of the function graphed below.



5. Determine the zeros of the following function:

$f(x) = 0.5\tan\left(-2\left(x+\frac{\pi}{2}\right)\right) + 2$ given $-\pi \leq x \leq \pi$

6. Solve the following:

$f(x) = 0.2\tan\left(\frac{\pi}{2}(x+1)\right) - 2 = 2 \quad given - 2\pi \leq x \leq 0$

7. Solve the following:

$f(x) = -3\tan\left(0.5\left(x + \frac{\pi}{2}\right)\right) - 6 = 10$

8. Solve the following:

$-5\tan\left(0.8\left(x + \frac{\pi}{4}\right)\right) + 4 \geq 1$