Problem 29 (Calc)

f is periodic with period p if and only if p is the smallest positive value such that $f(x-p) = f(x)$ for all $x \in D_f$

If $f(x) = |\sin(2\pi \sin(x))|$

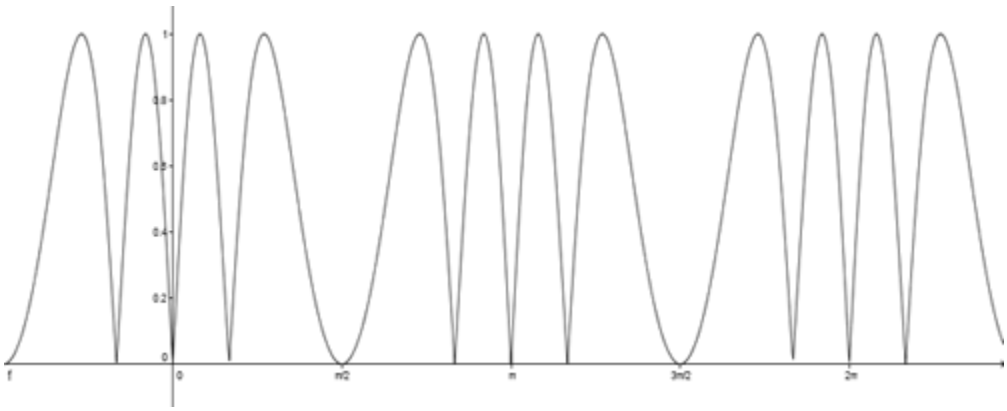
What is the period of $f(x)$?

Answer

$\boxed{\pi}$

Explanation

Below is the function graphed from $-\frac{\pi}{2}$ to $\frac{5\pi}{2}$



Clearly from the graph, the period is:

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