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21/479067/TK/52800

$T = 5.0\,s$

$A = 5\,cm$

$x = 0 \Rightarrow$ equilibrium

Moving toward negative x

Capture at $x = \cancel{\pm 2} +2.5\,cm$

(=)
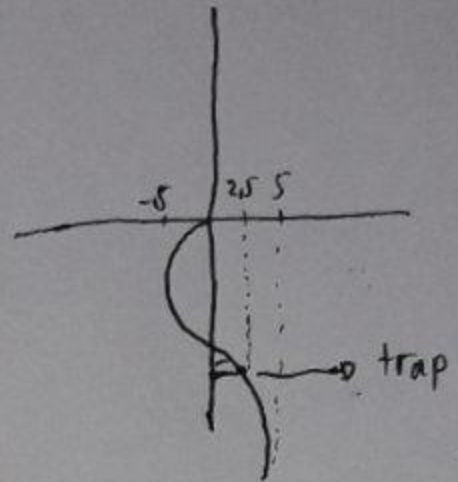
* By the graph, the robot will be capture

at $\cancel{5.0?}$. $y = \dfrac{7}{6}\pi$. By calculation,

$2,5 = -5\left(\sin\left(\dfrac{2\pi t}{5}\right)\right)$ | , since $\dfrac{2\pi t}{5} = y$,

$\dfrac{2,5}{-5} = \cancel{5}\left(\sin\left(\dfrac{2\pi t}{5}\right)\right)$ | $\dfrac{2\pi t}{5} = \dfrac{7}{6}\pi$

$-\dfrac{1}{2} = \sin\dfrac{2\pi t}{5}$ | $t = \dfrac{35}{12}$

$\sin^{-1}-\dfrac{1}{2} = \sin\dfrac{2\pi t}{5}$ | $t \approx 2,917$ sekon

$\sin\dfrac{7}{6}\pi = \sin\dfrac{2\pi t}{5}$

$\dfrac{7}{6}\pi = \dfrac{2\pi t}{5}$

$\dfrac{35}{12} = t$

$2,917$ sekon $= t$