

Sketch  $y = -2 \sin(4x - \pi) - 3$   
 $= -2 \sin 4 \left( x - \frac{\pi}{4} \right) - 3$

Amp: 2

midline  $y = -3$

min: -5

max: -1

period:  $\frac{2\pi}{4} = \frac{\pi}{2}$

Right  $\frac{\pi}{4}$

TICK MARKS

$$\frac{\pi}{2} \cdot \frac{1}{4} = \frac{\pi}{8}$$

