

PRE-AP ALGEBRA 2

4A.8 CLASSWORK

1) Find the period p of the sine waves.

a)

$$y = \sin(18x)$$

b)

$$y = \sin\left(\frac{\pi x}{16}\right)$$

$$(a) \quad p = \frac{2\pi}{6} = \frac{2\pi}{18} = \frac{\pi}{9}$$

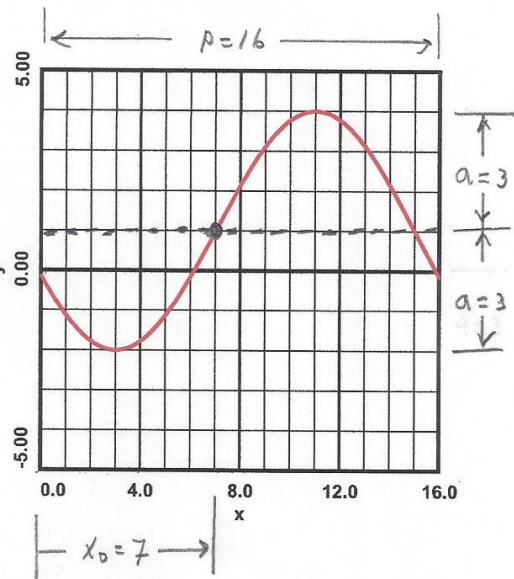
$$(b) \quad p = \frac{2\pi}{6} = \frac{2\pi}{\frac{\pi}{16}} = \frac{2\pi}{1} \cdot \frac{16}{\pi} = 32$$

$$y_0 = 1$$

2) Graph

$$y = 3 \sin\left[\frac{\pi}{8}(x - 7)\right] + 1$$

on the axes provided. On the graph, label the quantities p , a , x_0 and y_0 .



$$p = \frac{2\pi}{6} = \frac{2\pi}{\frac{\pi}{8}} = \frac{2\pi}{1} \cdot \frac{8}{\pi} = 16$$