I returned Quiz #6 (the chart).
No Quiz #7 today. It will be tomorrow. — The Chart.
Test #2 is Thursday.
Read the "5-point method" on the Trig Web Page.

II Graphing using 5-point method.

A The 5-points are: The 2 end points of the fundamental period together w/ the 1/4-point, 1/2-point, and 3/4-point.

B Example:

\[ y = \sin(x) \] ← Graph 1 period.

Solution: Interval is \([0, 2\pi]\)

\[
\frac{1}{4} \times 2\pi = \frac{\pi}{2} \quad \frac{1}{2} \times 2\pi = \pi \quad \frac{3}{4} \times 2\pi = \frac{3\pi}{2}
\]

\(\therefore 5\)-pts \(\{0, \frac{\pi}{2}, \pi, \frac{3\pi}{2}, 2\pi\}\)

C If \(y = a\sin(kx)\)

The period \(P = \frac{2\pi}{k}\)
D. Phase Shift.

1. Consider & Compare

$f(x) = \sin(2x) \quad g(x) = \sin\left(2\left(x + \frac{\pi}{6}\right)\right)$

After Class

$g(x)$ is $f(x)$ shifted to the LEFT $\frac{\pi}{6}$ units.

2. The amount of phase shift is determined by inspecting the argument of the function.

For example,

Given $y = \cos\left(2x + \pi\right)$, what is the phase shift? Set the argument equal to zero and solve

$2x + \pi = 0$

$x = -\frac{\pi}{2}$

So the "beginning point" for the fundamental period is at $x = -\frac{\pi}{2}$, which indicates a shift to the left of $\frac{\pi}{2}$ units.

The traditional way to handle phase shift is this:

$2x + \pi = 2\left(x + \frac{\pi}{2}\right)$ and this is the form in which you can see the phase shift of $\frac{\pi}{2}$ to the left.
Wrong graph.

no "points" on trig graphs.