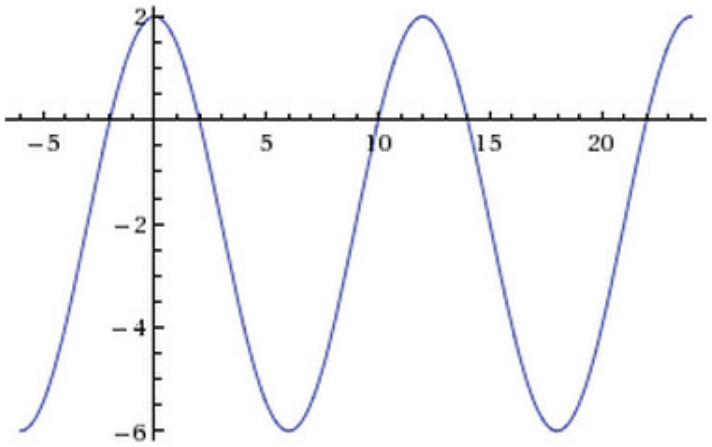
You will have at least 15 minutes to complete the quiz. No calculators.

1. [3 pts] The graph of a periodic function is given. Estimate its period, amplitude, and midline.



Period:

Ampltiude:

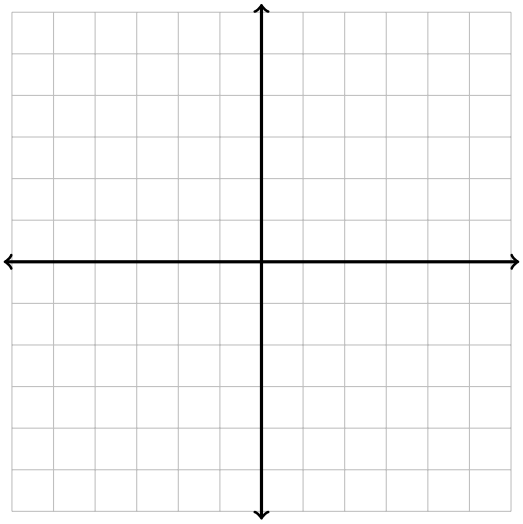
Midline:

2. [5 pts] Let $g(t) = 20 \cdot e^{0.001(t-1)}$. Identify a parent function $p(t)$, write an equation describing $g(t)$ as a transformation of $p(t)$, and identify the transformations that give $g(t)$.

3. [4 pts] Suppose $(3, 0)$ is a point on the graph of $f(t)$. Find a point on the graph of $\frac{1}{2}f(-\frac{1}{2}t) + 1$.

4. [8 pts] Suppose that a function f is periodic with period 4, and moreover it is given by the equation $f(x) = \sqrt{x}$ for $0 \leq x < 4$.

(a) Sketch a graph of f as accurately as possible. Include at least three periods.



(b) Find $f(-2)$. (You do not need to give me a decimal answer.)

(c) Compute $f(4)$.

(d) Find <u>all</u> solutions to the equation $f(x) = 1$.