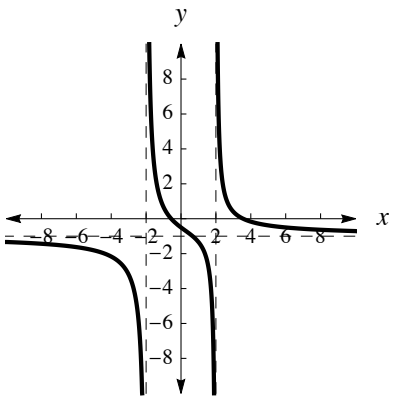
Quiz 2: Version C

First & Last Name: _____ **Class:** _____

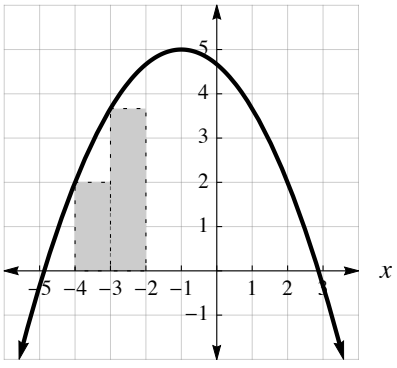
1. What are the equations of the *asymptotes* of the following function?



2. Sketch the graph of a function that has one *vertical asymptote* and a *domain*: $x < -2$ and $x \neq -4$.

3. Approximate the area between the parabola (shown below) and the x-axis for $-4 \leq x \leq 1$ using *left-hand rectangles* with widths of 1. Two rectangles have been drawn for you.

$$f(x) = -\frac{1}{3}(x+1)^2 + 5$$



Challenge (required for Honors)

4. Simplify $f(x) = \frac{x^2-2x-15}{x-5}$

5. Where does $f(x)$ in the previous question have a hole or asymptote? Is it a hole or an asymptote? Explain.