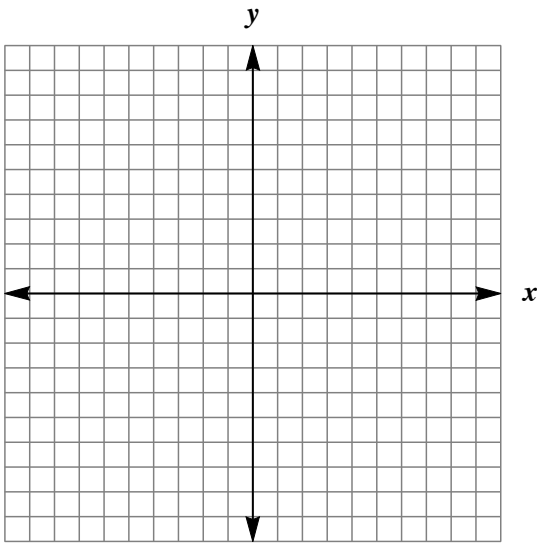
Quiz 1: Version D

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

1. Sketch the following piecewise function:

$$f(x) = \begin{cases} -5 & x < -5 \\ -x + 4 & x \geq -5 \end{cases}$$



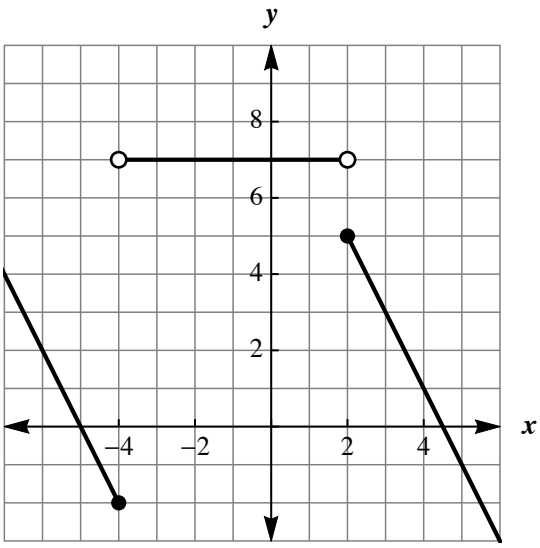
2. For the function in Question 1, evaluate:

a. $f(-8) =$

b. $f(-5) =$

c. $f(0) =$

3. Write the equation for the following graph:



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Challenge Options (required for Honors)

4. Convert (1, 4) into polar coordinates. Show your work.

5. Convert $(-55°, 12)$ into rectangular (Cartesian) coordinates. Show your work.

6. Write an example of a polynomial function with at least three terms, odd degree, and negative leading coefficient. Explain its end behavior.

7. Write an example of a polynomial function with six terms, a non-zero constant term, even degree greater than 6, and positive leading coefficient. Explain its end behavior.