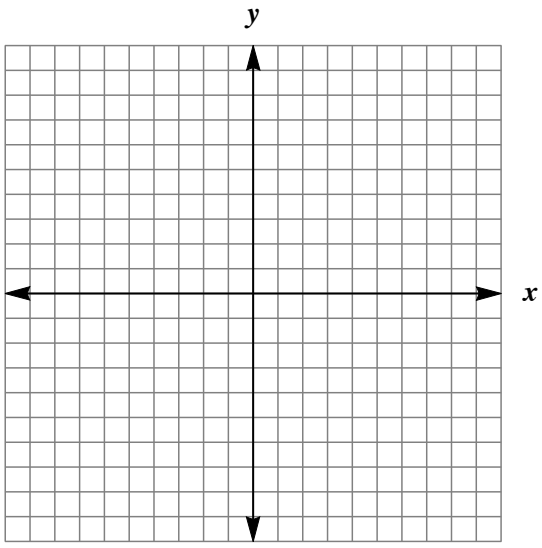
Quiz 1: Version C

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

1. Sketch the following piecewise function:

$$f(x) = \begin{cases} -2x - 4 & x \leq -4 \\ 3 & x > -4 \end{cases}$$



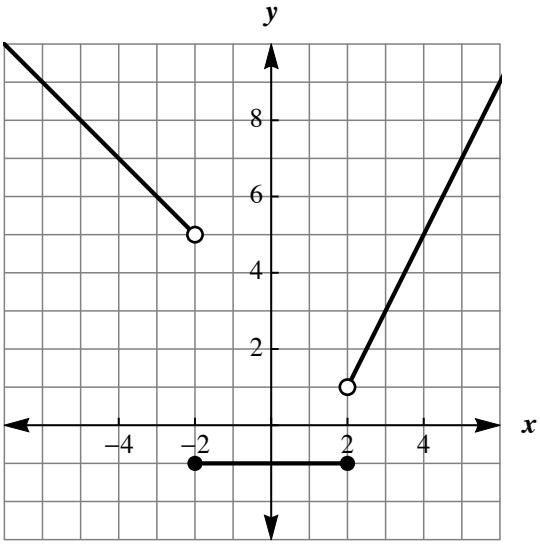
2. For the function in Question 1, evaluate:

a. $f(-7) =$

b. $f(-4) =$

c. $f(3) =$

3. Write the equation for the following graph:



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Challenge Options (required for Honors)

4. Convert $(6, -3)$ into polar coordinates. Show your work.

5. Convert $(115°, 10)$ into rectangular (Cartesian) coordinates. Show your work.

6. Write an example of a polynomial function with at least four terms, even degree, and positive leading coefficient. Explain its end behavior.

7. Write an example of a polynomial function with five terms, a non-zero constant term, odd degree greater than 3, and negative leading coefficient. Explain its end behavior.