

Name: _____

MATH 101

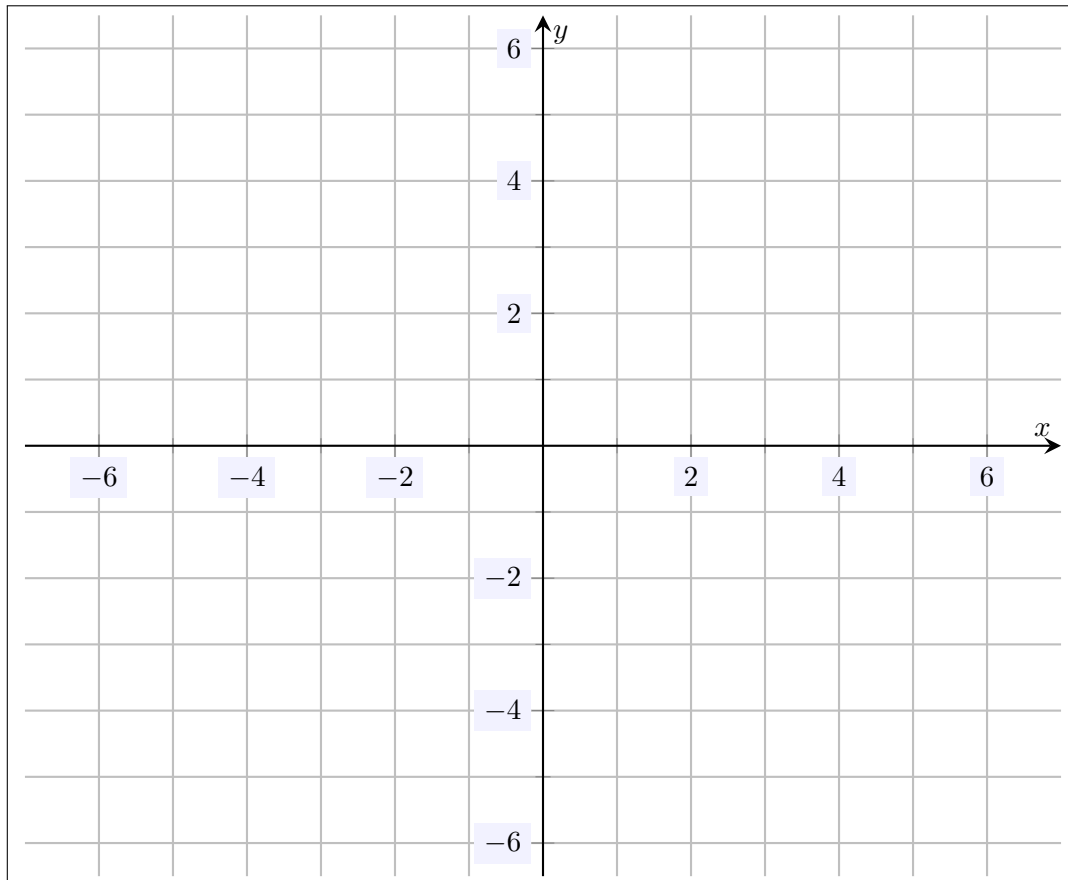
Fall 2021

HW 15: Due 11/16

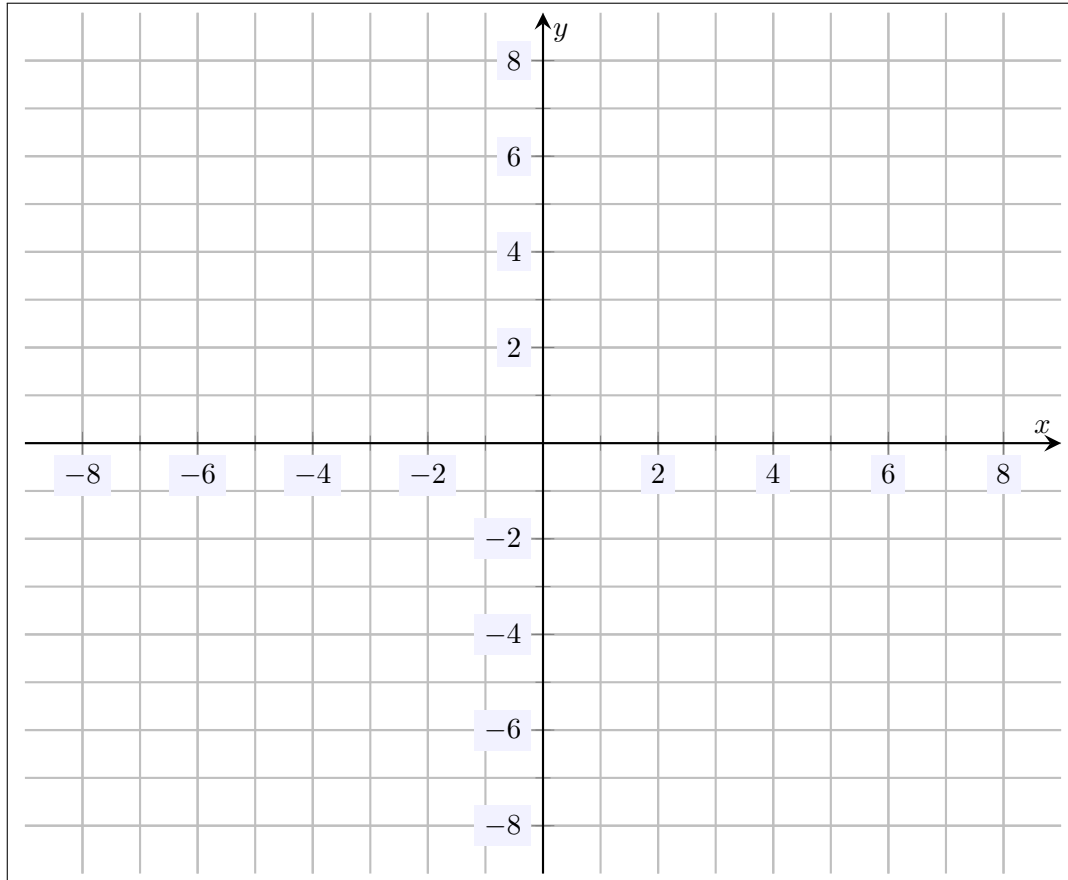
"He is a self-made man and worships his creator."

–Henry Clapp

Problem 1. (10pt) As accurately as possible, plot the function $f(x) = \frac{1}{4}(2^{x-2})$.



Problem 2. (10pt) Sketch a graph of the function $y = 4(2^{1-x})$.



Problem 3. (10pt) Consider the function $y = -9(2^{-2x})$.

- (a) Is the function increasing or decreasing? Explain.
- (b) Find the y -intercept of this function.
- (c) What are the x -intercepts and zeros for this function?
- (d) Find $y(-1)$.

Problem 4. (10pt) Consider the function $y = 3^{1-x} - 9$.

- (a) Is the function increasing or decreasing? Explain.
- (b) Find the y -intercept of this function.
- (c) What are the x -intercepts and zeros for this function?
- (d) Find $y(2)$.