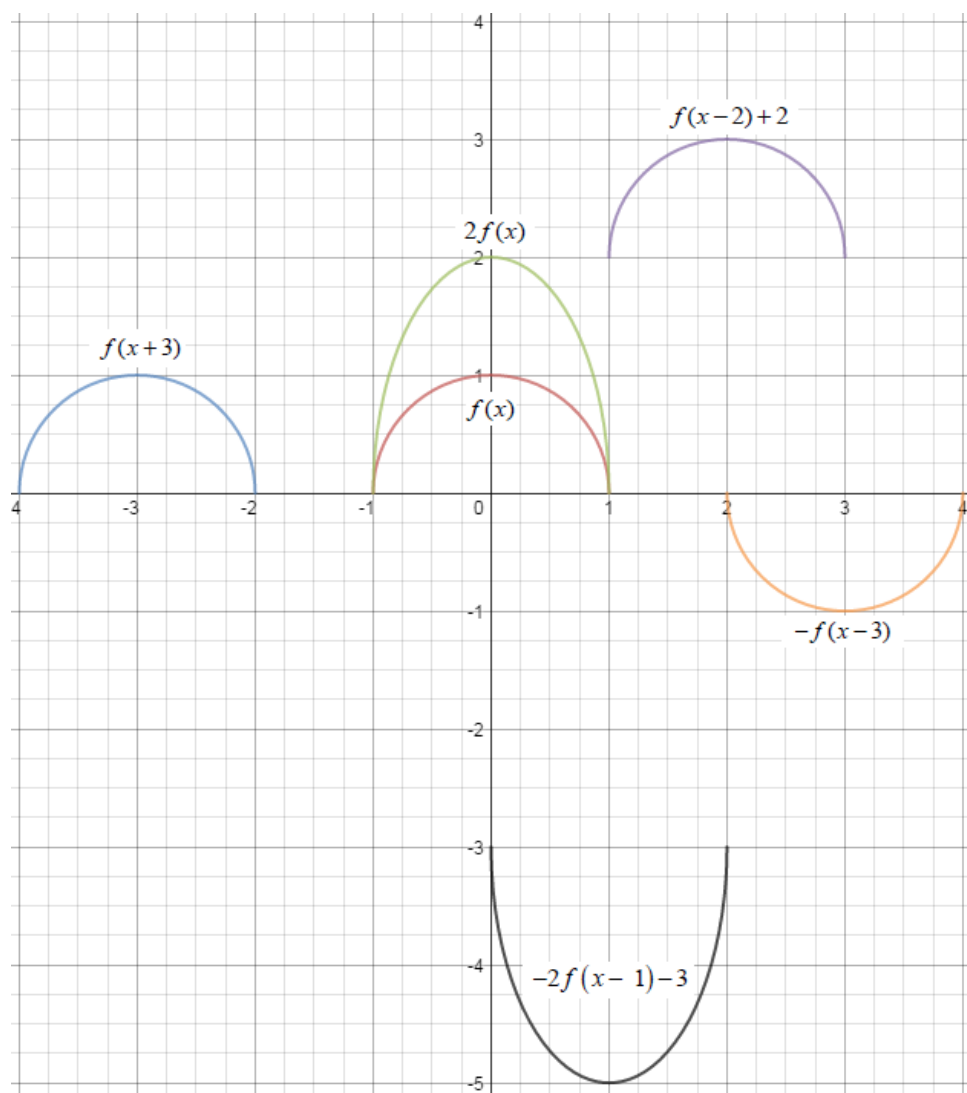


Exercise set 5.1: Graphing by the method of successive transformations

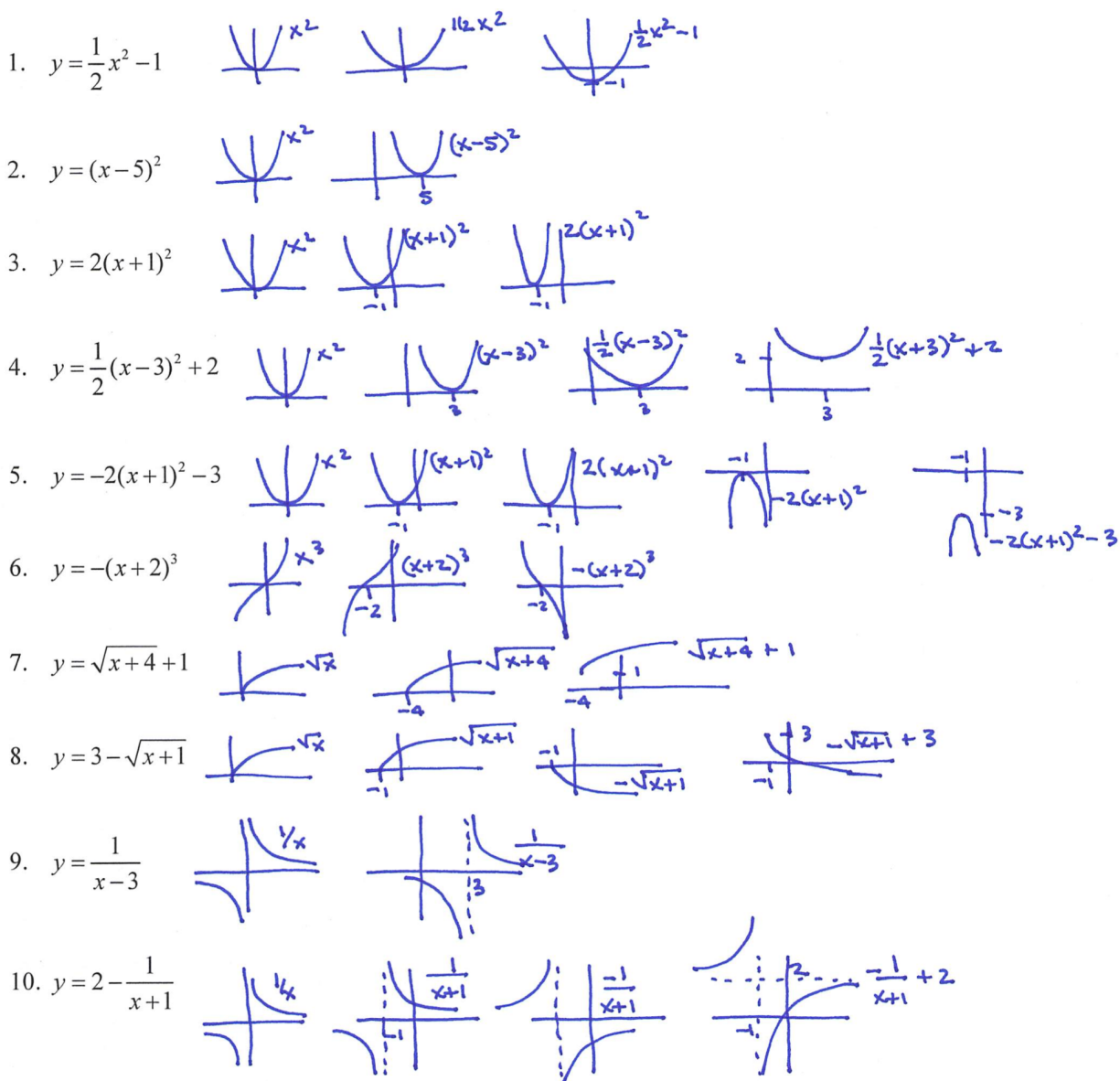
The goal for this homework is for you to practice sketching functions by applying transformations to a known base function.

The graph of a function $f(x)$ is shown on the axes below. Sketch the following graphs on the same axes:

- a. $f(x+3)$
- b. $2f(x)$
- c. $f(x-2)+2$
- d. $-f(x-3)$
- e. $-2f(x-1)-3$



Sketch the graph of the equation by translating, reflecting, compressing and stretching the graph of a known base function. You can check your result using the online graphing utility at www.desmos.com/calculator.



Here are the graphs of $y = \sqrt{x-2}$, $y = x^5$, $y = -\frac{1}{x^2}$, $y = 2^{-x}$, $y = -x-1$. Label each one.

