

# Retake 5A: Algebra of functions

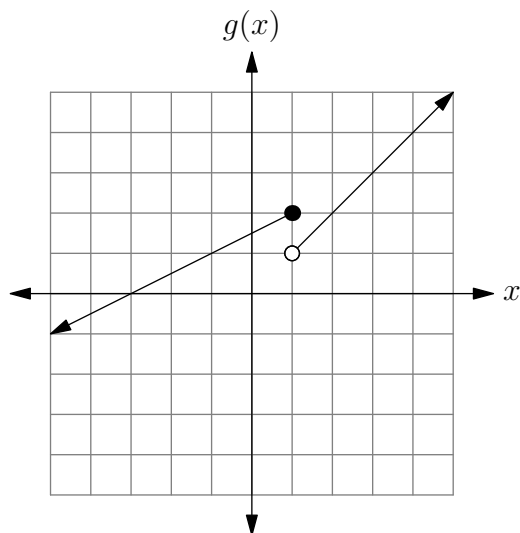
MATH 1110, FALL 2017

NAME:

1. (6 points) Define the function  $f(x) = 2x - 3x^2$ . Simplify the following difference quotient.

$$\frac{f(x+h) - f(x)}{h}$$

2. (8 points) Write the formula for the piecewise function  $g(x)$  shown in the graph.



3. (6 points) The following graph shows a function  $f(x)$ . Estimate the rate of change for this function over the interval  $x = -1$  to  $x = 2$ .

