Name: _____ PID: _____

Note: This assignment has **four pages**. There are 32 total points.

**Problem 1** (2 points). The number of cubic yards of dirt, $D$, needed to cover a garden with area $a$ square feet is given by $D = g(a)$.

(a) A garden with area 5000 $ft^2$ requires 50 cubic hards of dirt. Express this information in terms of the function $g$.

(b) Explain the meaning of the statement $g(100) = 1$.

**Problem 2** (2 points). Complete exercise 6 in Chapter 1.1; write the letters of the correct graphs here:

**Problem 3** (2 points). Complete exercise 12 in Chapter 1.1; write the letters of the correct tables here:

**Problem 4** (2 points). Complete exercise 14 in Chapter 1.1; write the letters of the correct graphs here:

**Problem 5** (2 points). Solve exercise 28 in Chapter 1.1:

$f(-2) =$ _____
$f(-1) =$ _____
$f(0) =$ _____
$f(1) =$ _____
$f(2) =$ _____

**Problem 6** (2 points). Solve exercise 32 in Chapter 1.1:

$f(-2) =$ _____
$f(-1) =$ _____
$f(0) =$ _____
$f(1) =$ _____
$f(2) =$ _____

**Problem 7** (4 points). Solve exercise 2 in Chapter 1.2.

**Problem 8** (4 points). Solve exercise 4 in Chapter 1.2.

**Problem 9** (2 points). Solve exercise 8 in Chapter 1.2. Write your answer BOTH as an inequality and in interval notation.

**Problem 10** (2 points). Solve exercise 16 in Chapter 1.2. Write your answer BOTH as an inequality and in interval notation.

**Problem 11** (4 points). Sketch the graph of the function defined in exercise 36 of Chapter 1.2. You must label your axes.

**Problem 12** (2 points). Solve exercise 4 in Chapter 1.3. Be sure to show your work.

**Problem 13** (2 points). Solve exercise 8 in Chapter 1.3. Be sure to show your work.

[OPTIONAL]
**Survey Question.** These questions help me understand how people are doing in the class. They are optional and not graded at all. Your feedback is appreciated and helps me make the class better.

1. Roughly how many hours did you spend working on this homework assignment?

2. Roughly how many hours did you spend studying, attending SI sessions, or reviews your notes this week (not including homework time)?