

Name \_\_\_\_\_

University of Baltimore  
Math 107: College Mathematics  
Homework: Chapter 2.7-3.1(A)

Date \_\_\_\_\_

BECAUSE THIS IS A GRADED ASSIGNMENT, YOU ARE NOT ALLOWED TO EITHER GIVE OR RECEIVE HELP IN ANSWERING THESE QUESTIONS.

Answer each question as indicated. **Think** first, then write. **Show all your work**, and remember to **check** your answers! If you use scrap paper number your work and hand the scrap paper in. Please place your answers in the spaces provided.

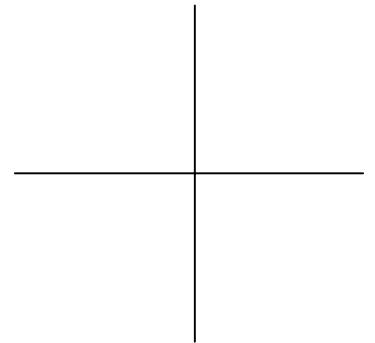
1. Let  $g(x) = 2x^2 - x - 4$  and let  $h(x) = x - 1$ . Find  $(g - h)(x)$  and write your answer in simplest form.

1. \_\_\_\_\_

2. Let  $g(x) = 2x^2 - x - 4$  and let  $h(x) = x - 1$ . Find  $(g \circ h)(x)$  and write your answer in simplest form.

2. \_\_\_\_\_

3. Graph the function  $f(x) = x^2 - 4x - 4$ , labeling vertex and all intercepts with their coordinates.



4. A child throws a ball up in the air. The height in feet,  $h$ , after  $t$  seconds is given by the function

$h(t) = -16t^2 + 32t + 4$ . a) How far above the ground is the ball when the child lets it go? b) How long after the child lets it go does the ball reach its maximum height? c) What is the maximum height reached by the ball?

4a. \_\_\_\_\_

4b. \_\_\_\_\_

4c. \_\_\_\_\_