**Secondary Math 2 5.5 Homework Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_**

**Combining Functions**

1. **Given and , simplify the expressions:**

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| a) |  | b) |  | c) |  |
| d) |  | e) |  | f) |  |

1. **Given the following functions, answer questions**

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1. A company estimates that its cost and revenue can be modeled by the functions  and , where x is the number of units produced. (Assume C(x) is cost and R(x) is revenue)

a) Write the equation, P(x), that would model the company’s profit. (Hint: profit = revenue – cost)

b) What would be the profit if the company only sold 10 units?

c) What would be the profit if the company sold 200 units?

**Review Problems:**

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|  | Simplify: |  | Simplify: |
|  | Simplify: |  | Simplify: |