Chapter 7 Practice Sheet

Exam#1 is on Thursday, Feb 13th, 2020

- Work on the practice sheet
- Chapter 7 Test on P.498-499
- Chapter 7 Review Exercise on P.495 – 497

This worksheet only covers some basic questions of the chapter, make sure to work on more advance questions from the textbook.

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1. For the function given by

$$f(x)=\begin{cases} 2x^2-3, & \text{if } x \le 2, \\ x^2, & \text{if } 2 < x \le 4, \\ 5x+7, & \text{if } x > 4 \end{cases}$$

a) $f(0)$ b) $f(4)$ c) $f(6)$

2. Let $f(x)=-2x^2+5$ and $g(x)=x-3$. Find each of the following.

a) $(f+g)(-1)$ b) $(f-g)(2)$

c) $f(0)\cdot g(0)$ d) $g(3)/f(3)$

3. For the graph of f on Page 458 #28, determine

a) The domain of f

b) The range of f

c) $f(2)$

d) Any x-values for which $f(x) = 2$

4. Find the domain of the following function.

$$\frac{x-3}{x^2-5x+6}$$

5. Life Expectancy of Males in the United States.

In 2000, the life expectancy of males born in that year was 74.3 years. In 2010, it was 76.2 years. Let $E(t)$ represent life expectancy and t the number of years since 2000.

a) Find a linear function that fits the data.

b) Use the function of part (a) to predict the life expectancy of males in 2016.