

Week 3 Math 1508 Worksheet #1

Problem 1: Solve for x:

$$3 - 4x = \frac{5x - 1}{2y}$$

Problem 2: Solve for x:

$$y = \frac{7 - 2x}{7x + 1}$$

Problem 3: Let $f(x) = \frac{1}{\sqrt{4+3x}}$ and $g(x) = -x^2 - 3x + 4$, find the following.

- a. $f(-1)$
- b. $f(-2)$
- c. $g(-2)$
- d. $g(f(0))$
- e. $(f \circ g)(x)$

Problem 4: Graph the following functions on the same graph

- a. $f(x) = \sqrt{x}$
- b. $f(x) = \sqrt{x - 2}$; describe the shift
- c. $f(x) = 2 - \sqrt{x}$; describe the shift
- d. $f(x) = 2\sqrt{x}$; describe the change from $f(x) = \sqrt{x}$
- e. $f(x) = 2 - 2\sqrt{x - 2}$; describe all changes from $f(x) = \sqrt{x}$

