

Math 120 HW #4

Due: Oct. 13

Chapter 2.4

Find the inverse of the given function.

1. $f(x) = 3x + 7$

2. $g(x) = 2x + 1$

5. $A(r) = \pi r^2$, for $r \geq 0$

10. Using the horizontal line test, determine if the function $F(x) = |x - 9|$ is invertible.

Chapter 2.5

Determine the x and y intercepts of these equations and sketch their graphs. Give the domain, and if possible, the range. Then tell whether they pass the vertical and horizontal line tests.

9. $y = 3x - 5$

14. $y = 4x^2 - 16$

26. $y = x^2 + 2x - 8$

29. $f(t) = \sqrt{t^2 - 9}$

32. $H(y) = |u - 3|$

35.

$$g(p) = \begin{cases} p + 1 & \text{if } 0 \leq p \leq 7 \\ 5 & \text{if } p > 7 \end{cases}$$

Chapter 2.7

Using the basic graphs for quadratic, rational, absolute value and square root graphs we went over in class (also Figure 2.38 in the book) plot the given functions.

3.

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

6. $y = |x| - 2$

7. $y = |x + 1| - 2$

10. $y = (x - 1)^2 + 1$

14. Describe what must be done to the graph of $f(x)$, which you are not given, to produce the graph of

$$y = f(x + 3) - 4$$