Business PreCalculus MATH 1643 Section 004, Spring 2014
Answer key: worksheet 9

1- Answers:

a. $x < -6$, in the interval notation $(-\infty, -6)$

b. $x < \frac{-1}{4}$, or $(-\infty, \frac{-1}{4})$

c. $x \leq \frac{3}{2}$, or $(-\infty, \frac{3}{2}]$

d. $x \geq \frac{7}{4}$, or $[\frac{7}{4}, \infty)$

e. It is true for any real numbers, so $(-\infty, \infty)$

2- Answers:

a. $2 \leq x \leq 5$, then in the interval notation $[2, 5]$

b. $x > -3$ or $x \leq -3$, then in the interval notation $(-3, \infty) \cup (-\infty, -3] = (-\infty, \infty)$

c. $x \geq -2$ and $x < 5$, in the interval notation $[-2, \infty) \cap (-\infty, 5) = [-2, 5)$

d. $x \leq \frac{8}{5}$ or $x < 3$, in interval notation $(-\infty, \frac{8}{5}] \cup (-\infty, 3) = (-\infty, 3)$

e. First inequality is true for all real numbers and the solution for the second is $x \leq 5$, in the interval notation $(-\infty, \infty) \cap (-\infty, 5] = (-\infty, 5]$

f. $-2 \leq x < 4$, in the interval notation $[-2, 4)$