Math 1314
Homework 5

Enter your answers in the EMCF titled "Homework 5" at casa.uh.edu before the due date/time.
In the problem numbers given below, Problem 2.3.42 refers to Chapter 2, Section 3, Problem 42.
The problems can be found in the online text.

1. **Problem 2.3.4**

   A. 0, 0, 0
   B. -4, 0, does not exist
   C. 0, -4, does not exist
   D. -2, 0, does not exist
   E. 0, does not exist, does not exist

2. **Problem 2.3.8**

   A. 1, 3, does not exist
   B. 3, 3, does not exist
   C. 3, 1, does not exist
   D. 3, 3, 3
   E. 1, 1, 1

3. **Problem 2.3.16**

   A. 4, -5, does not exist
   B. 4, 1, does not exist
   C. -5, 15, does not exist
   D. 3, 3, 3
   E. -5, 4, does not exist

4. **Problem 2.3.26**

   A. True
   B. False

5. **Problem 2.3.28**

   A. True
   B. False

6. **Problem 2.3.30**

   A. True
   B. False

7. **Problem 2.4.4, determine if the function is continuous at $x = -1$ and if it is not, state the reason.**

   A. Continuous at $x = -1$
   B. Discontinuous at $x = -1$, because $f(-1)$ is not defined.
   C. Discontinuous at $x = -1$, because $\lim_{x \to -1} f(x)$ does not exist.
   D. Discontinuous at $x = -1$, because $f(-1)$ is defined and $\lim_{x \to -1} f(x)$ exists, but they are not equal.

8. **Problem 2.4.6, determine if the function is continuous at $x = 0$ and if it is not, state the reason.**

   A. Continuous at $x = 0$
   B. Discontinuous at $x = 0$, because $f(0)$ is not defined.
   C. Discontinuous at $x = 0$, because $\lim_{x \to 0} f(x)$ does not exist.
   D. Discontinuous at $x = 0$, because $f(0)$ is defined and $\lim_{x \to 0} f(x)$ exists, but they are not equal.

9. **Problem 2.4.10, determine if the function is continuous at $x = -2$ and if it is not, state the reason.**

   A. Continuous at $x = -2$
   B. Discontinuous at $x = -2$, because $f(-2)$ is not defined.
   C. Discontinuous at $x = -2$, because $\lim_{x \to -2} f(x)$ does not exist.
   D. Discontinuous at $x = -2$, because $f(-2)$ is defined and $\lim_{x \to -2} f(x)$ exists, but they are not equal.

10. **Problem 2.4.12**

    A. Not continuous
    B. Continuous