

Math 1314
Homework 13

Enter your answers in the EMCF titled "Homework 13" at casa.uh.edu before the due date/time. In the problem numbers given below, Problem 4.6 42 refers to Chapter 4, Section 6, Problem 42. The problems can be found in the online text.

1. Problem 4.6.42A

- A. $[-0.1, \infty)$ B. $(-\infty, \infty)$ C. $(-\infty, 0) \cup (0, \infty)$
D. $(-\infty, 0) \cup (1, \infty)$ E. None of the above

2. Problem 4.6.42B (find only x intercepts)

- A. $(1, 0)$ and $(2, 0)$ B. $(-1, 0)$ and $(-2, 0)$ C. $(-0.5, 0)$ and $(-2, 0)$
D. $(0, -1)$ and $(0, -2)$ E. None of the above

3. Problem 4.6.42C

- A. $x = 0, y = 1$ B. $x = 1, y = 0$ C. $y = 0$
D. There are no asymptotes E. None of the above

4. Problem 4.6.42D

- A. increasing on $\left(\frac{-4}{3}, 0\right)$, decreasing on $\left(-\infty, \frac{-4}{3}\right) \cup (0, \infty)$
B. increasing on $\left(-\infty, \frac{-4}{3}\right) \cup (0, \infty)$, decreasing on $\left(\frac{-4}{3}, 0\right)$
C. increasing on $(-\infty, -2) \cup (-1, \infty)$
D. increasing on $\left(\frac{-4}{3}, 0\right) \cup (3, \infty)$, decreasing on $\left(-\infty, \frac{-4}{3}\right) \cup (0, 3)$
E. increasing on $(-\infty, -2) \cup (-1, 0) \cup (0, \infty)$, decreasing on $(-2, -1)$

5. Problem 4.6.42E

- A. relative maximum at $(-2, 4)$, relative minimum at $(-1, 1)$
B. relative maximum at $(-1, 1)$, relative minimum at $(-2, 4)$

- C. relative minimum at $\left(\frac{-4}{3}, \frac{1}{8}\right)$, no relative maximum
- D. relative minimum at $\left(\frac{-4}{3}, \frac{-1}{8}\right)$, no relative maximum
- E. relative minimum at $\left(\frac{-4}{3}, \frac{-1}{8}\right)$, relative maximum at $(0, 2)$

6. Problem 4.6.42F

- A. concave upward on $\left(\frac{-5}{3}, 0\right)$, concave downward $\left(-\infty, -\frac{5}{3}\right) \cup (0, \infty)$
- B. concave upward on $(-\infty, 0) \cup (0, \infty)$
- C. concave upward on $(-2, \infty)$, concave downward on $(-\infty, -2)$
- D. concave upward on $(-2, 0) \cup (0, \infty)$, concave downward on $(-\infty, -2)$
- E. none of the above

7. Problem 4.6.42G

- A. $\left(\frac{-4}{3}, \frac{1}{8}\right), (-2, 0)$ B. $(-2, 0)$ C. $\left(\frac{-5}{3}, \frac{-2}{25}\right)$
- D. $(-1, 0)$ E. none of the above

For problems 8 – 10, choose from these answers.

- A. 5 B. 4 C. 3 D. 2 E. 1 F. 0**

8. Problem 4.6.60F

9. Problem 4.6.60G

10. Problem 4.6.60H