

Answers for Quiz #4

1. a. increasing: $(-\infty, -4) \cup (-4, 0) \cup (0, \infty)$
no decreasing intervals
no relative extrema
- b. increasing: $(0, \pi)$
decreasing: $(-\pi/2, 0) \cup (\pi, 3\pi/2)$
relative min: $(0, 2)$
relative max: $(\pi, \pi^2 - 2)$
- c. increasing: $(-\infty, 1/8)$
decreasing: $(1/8, \infty)$
relative maximum: $(1/8, -5/4)$
- d. increasing: $(-\pi/2, \pi/4)$
decreasing: $(\pi/4, 3\pi/4)$
2. a. concave up: $(-\infty, -2) \cup (2, \infty)$
no concave down intervals
no points of inflection
- b. concave up: $(0, \infty)$
concave down: $(-\infty, 0)$
no points of inflection
- c. concave up: $(0, \pi/6) \cup (\pi/6, 7\pi/6)$
concave down: $(7\pi/6, 2\pi)$
points of inflection: $(7\pi/6, 0)$
3. a. $2/3$
b. $-1/\sqrt{2}$
c. 0
4. a. $y = 1/2, y = -1/2$
b. $y = 6, y = -6$

If you feel that there are errors with this answer page, please email Brian Beck-Smith at bbeck@utdallas.edu.