

Exam 2 Suggested Exercises Solutions

Section 14.7

2. (a) saddle point, (b) local maximum point, (c) test is inconclusive.
6. $(2, 4)$ is a saddle point.
12. $(1, 0)$ is a saddle point and $(1/3, 1/3)$ is a local maximum point.
28. absolute max of 2 at $(1, 0)$ and $(3, 2)$ and absolute min of -2 at $(1, 4)$ and $(5, 0)$.
32. absolute max of 2 at $(1, \sqrt{2})$ and
absolute min of 0 along line segments $x = 0$ for $0 \leq y \leq \sqrt{3}$ and $y = 0$ for $0 \leq x \leq \sqrt{3}$.
38. $(4/3, 2/3, 10/3)$

Section 14.8

4. maximum of 26 at $(2, 3)$ and minimum of -26 at $(-2, -3)$.
6. maximum of $\sqrt{2}$ at $(\pm \frac{1}{2^{1/4}}, \pm \frac{1}{2^{1/4}})$ and minimum of 1 at (0 ± 1) and $(\pm 1, 0)$.