

MATH 250
Exam I
September 29, 2009

ANSWER KEY

1. (a) F (b) C (c) A (d) D
2. C
3. D
4. A
5. B
6. C
7. C
8. A
9. B
10. D
11. B
12. D
13. (a) $y = -3, 0, 3$ (b) $y = -3$ is unstable, $y = 0$ is semistable, $y = 3$ is
(asymptotically) stable. (c) -3 (d) $-\infty$ (e) 3
14. (a) $Q' = 20 - \frac{Q}{50}$, $Q(0) = 0$ (b) $Q(t) = 1000 - 1000e^{-t/50}$
(c) 10 grams/liter