Answer Key
Math 1271
Fall 2004 Final Exam

Multiple Choice Problems

1. D
2. C
3. C
4. C
5. B
6. B
7. E*
8. A
9. A
10. C
11. B
12. A

*given answer should not include the endpoints

Written Answer Problems

13. a) dy/dx = -x/y
    b) y = x - 2

14. see solution set for proof

15. 61/6

16. 1

17. a) domain: all real numbers except x = ±2
    b) y-intercept and x-intercept: (0, 0)
    c) vertical asymptotes: x = -2, x = +2;
       horizontal asymptote: y = f(0)
    d) critical points: x = ±2 (f'(x) undefined) and
       x = 0 (f''(x) = 0);
       intervals of increase: (-∞, -2), (-2, 0)
       intervals of decrease: (0, 2), (2, ∞)
    e) no points of inflection;
       intervals of upward concavity: (-∞, -2)
       and (2, ∞),
       interval of downward concavity: (-2, 2)
    f) see graph below

18. problem missing (sorry...)

graph for #17(f):

![Graph Image]