

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 $x = \pm 2$
 - b) y-intercept and x-intercept: $(0, 0)$
 - c) vertical asymptotes: $x = -2, x = +2$;
horizontal asymptote: $y = 1$
 - d) critical points: $x = \pm 2$ ($f'(x)$ undefined) and $x = 0$ ($f'(x) = 0$);
intervals of increase: $(-\infty, -2), (-2, 0)$
intervals of decrease: $(0, 2), (2, \infty)$
 - e) no points of inflection;
intervals of upward concavity: $(-\infty, -2)$
and $(2, \infty)$,
interval of downward concavity: $(-2, 2)$
 - f) see graph below

18. problem missing (sorry...)

graph for #17(f):

