Solutions to Exam IIA Spring 2003

1. B

2. C

3. B

4. D

5. E

6. A

7. A

8. A

9. B

10. E

11. A

12. a) $< 34, 4 >$ b) $< 54, 6 >$ c) $t = \dfrac{2}{3}$

13. a) $y' = \dfrac{-3x^2y^2 + 14xy - 5}{2x^3y - 7x^2 + 6y^2}$ b) $y + 2 = -\dfrac{45}{13}(x - 1)$

14. a) $L(x) = \dfrac{7}{4} + \dfrac{2}{7}\left(x - \dfrac{49}{16}\right)$ b) $\sqrt{3} \approx \dfrac{194}{112}$(NOTE directions about calculators on this exam)

15. a) $y - 9 = \dfrac{7}{3}(x - 3)$ b) $\left(\dfrac{3}{4}, \dfrac{57}{16}\right)$

16. $\dfrac{12}{485}$rad/sec

17. a) $2x\cos(x^2)e^{\sin(x^2)}$ b) $(3x^2 - 1)\sec^2(x^3 - x + 1)$ c) $\dfrac{(e^x + e^{-x})^2 - (e^x - e^{-x})^2}{(e^x + e^{-x})^2}$