

Answers to Math 108, Spring 2000 final exam

1. $3e^4 + 1$
2. 45
3. $4 - 2\pi$
4. 23.8
5. $4\frac{1}{2}$
6. $\frac{14}{9}$
7. \$4,000
8. 1000
9. $\frac{10000}{.055}(e^{.55} - 1)$
10. $1 - \frac{3}{e^2}$
11. $\frac{dM}{dt} = 0.07M - 120,000, \quad M(0) = 3,000,000$
12. 3.35
13. $\ln 2$
14. $y = 5$ only
15. $\frac{1}{2}$
16. $z = 9x + 6y - 18$
17. $\frac{5}{6}$
18. 0.3
19. $\frac{1}{12}$
20. $\frac{3}{8}$
21. 2
22. $\frac{9}{4}$
23. $\frac{3}{4}$
24. $(2y + xy^2)e^{xy}$

- 25. 100
- 26. $(2, 1)$
- 27. $x = \frac{1}{2}$
- 28. $\sqrt{22}$
- 29. a circle of radius 2
- 30. $(-2, 4)$ is a saddle point