

Answers to Even-Numbered Exercises

Exercises 5.1

8. $-5000e^{-0.02t} - 50 \ln |t|$

12. verify

16. $A=1/12$

22. $A=-1/2$

34. $\frac{1}{3}x^3 - \frac{3}{2}x^2 + x + c$

38. $-2e^{-0.5t} + c$

46. $y = \frac{1}{2}x^2 + \ln |x| + c$

52. $y = x^2 + x - 3$

70. \$2300

72. (a) 5 seconds. (b) 150 feet.

76. (a) $F(t) = -50e^{-0.14t} + 100$

(b) 11.5 hours

(c) 100

Exercises 5.2

2. $\frac{1}{2}(\ln x)^2 + c$

6. $\frac{1}{3}e^{x^3-3x+1} + c$

10. $e^x - \ln(1 + e^x) + c$

32. $y = \frac{1}{6}(4t + 1)^{3/2} - \frac{3}{2}$