

4.1

1. $x^5 + 2x^3 - x + C$

17. $x^2 - x^3 + C$

29. $x^3 + \frac{x^2}{2} - 2x + C$

30.

$\frac{4}{5}t^5 - \frac{4}{3}t^3 + t + C$

32. $\theta + C$

34. $-\frac{1}{5x^5} + C$

36. $\frac{t^3}{3} + \cos t + C$

42. $-\csc x + C$

57. $h(t) = 2t^4 + 5t - 11$

58.

$f(x) = 3x^2 + 10$

60. $s = -16t^2 + 50t + 5$

max ht = 44.05 ft

62. $s = -4.9t^2 + 18t + 2$

max ht. = 18.53 m

4.2

51. $70/3$

56. $7/12$

4.1-4.4 Review Solutions

4.3

1. 8

2. 15

3. $7/24$

4. 4

5. 24

6. $128/3$

7. -12

8. $\frac{18}{5} \sqrt[3]{9}$

12. $\frac{56}{12} \sqrt{2}$

14. $15/2$

23. $9/2$

27. $\frac{\pi}{6} - \frac{\sqrt{3}}{2} + 1$

28. $\frac{\pi}{6}$

31. 0

9. Area = 2

(original problem $A=12$)

43. Arrgh! $C = \left(1 \pm \sqrt{\frac{6-4\sqrt{2}}{3}}\right)^2$

$C \approx .4380$
or

$C \approx 1.7908$

4.4 (cont)

47. $8/3$

69. $35/4$

72.

$F(2) = 1.4161$

$F(5) = .7163$

$F(8) = 1.4155$

76. a) $\frac{x^4}{4} + \frac{x^2}{2}$

b) $x^3 + x$

77 a) $\frac{3}{4} x^{4/3} - 16$

b) $\sqrt[3]{x}$

84. \sqrt{x}

85. $x \cos x$