Section 5.1

2. x = 2
38. $4535.15
42. $597.81

Section 5.2

2. a. f is increasing, y-int = 1, and does not cross the x-axis
   b. f is increasing and y-int = 2, does not cross the x-axis
8. ≈ $10,257.92

Section 5.3

2. a. $\log_3 243 = 5$ b. $\log_3 \frac{1}{81} = -4$
   c. $\log_c d = p$ d. $\log_7 (100p) = x$
   e. $\log_3 \frac{P}{F} = -2x$ f. $\log_{0.9} \frac{1}{2} = t$
4. a. $3^4 = 81$ b. $4^{-4} = \frac{1}{256}$
   c. $v^q = w$ d. $6^3 = 2x - 1$
   e. $4^{5-x} = p$ f. $a^{\frac{3}{4}} = 343$
16. a. 7 b. - 6 c. 5
   d. - 3 e. 8 f. $\frac{2}{3}$
   g. 5e
18. $x = -\frac{3}{2}$
20. No solution (x=-1 is extraneous)
26. $x = \frac{1}{8}$
44. $f(x) = F(x+3)$
60. the year 2015
62. approx. 14.27 years

Section 5.4

4. $5\log_a y + 2\log_a w - 4\log_a x - 3\log_a z$
6. $\frac{1}{2}\log y - 4\log x - \frac{1}{3}\log z$
10. a. $\log_4(3xz)$ b. $\log_4\left(\frac{x}{7y}\right)$
   c. $\log_4 \sqrt[3]{w}$
14. $\log y^4$
18. $x = \frac{13}{3}$
22. $x = \frac{2}{15}$
46. f is decreasing, x-int =1 and does not cross the y-axis

Section 5.5

Section 5.5 (con't)

18. $x = \frac{301}{195} \approx 1.54$
50. $t = \frac{\ln\left(\frac{A}{P}\right)}{n\ln\left(1+\frac{r}{n}\right)}$
54. a. 7.21 hr. b. 3.11 hr.

2. $x = \frac{\log 3}{\log 4} \approx 0.79$ 12. $x = \frac{\log 1600}{\log \frac{5}{16}} = -\frac{\log 1600}{\log \frac{16}{5}} \approx -6.34$	