

## Chapter 5 Solutions

Section 5.1

Question 1 1) \$80, 2) \$18,415, 3) approximately 2.4%

Question 2 1) \$103,507.98, 2) 8.96%, 3) \$12561.52

Question 3 1) approximately 2.22%

Question 4 1) \$5684.53, 2) \$10,025.88

Section 5.2

Question 1 1a)  $\log_5(125) = 3$ , 1b)  $\log_2\left(\frac{1}{16}\right) = -4$ , 1c)  $\ln\left(\frac{FV}{PV}\right) = rt$

2a)  $7^2 = 49$ , 2b)  $10^{-3} = 0.001$ , 2c)  $10^0 = 1 + Z$

Question 2 1a) 2, 1b) -1

2) approximately 2.0153

Question 3 1) approximately 8.66 years

2a) 500 thousand units, 2b) approximately 0.405 years, 2c) no, 2d) highest sales get is 2000 thousand units

Section 5.3

Question 1 1a) \$986,454.92, 1b) \$202,75, 2) \$172,909.51

Question 2 1) \$21,084.01

Question 3 1) \$314.94

Section 5.4

Question 1 1) \$960,729.86

Question 2 1) \$1336.80

Question 3) 1a) \$892.63, 1b) \$5355.78, \$355.78,

1c)

<b>Payment Number</b>	<b>Amount of Payment</b>	<b>Interest in the Payment</b>	<b>Amount in Payment Applied to Balance</b>	<b>Outstanding Balance at the End of the Period</b>
0				5000
1	892.63	100.00	792.63	4207.37
2	892.63	84.15	808.48	3398.89
3	892.63	67.98	824.65	2574.24
4	892.63	51.48	841.15	1733.09
5	892.63	34.66	857.97	875.12
6	892.62	17.50	875.12	0.00
<b>Total</b>	<b>5355.77</b>	<b>355.77</b>		