

APPLIED FINITE MATHEMATICS
3rd ed, 2016 Sekhon/Bloom

Answers to Odd Numbered Homework
Problems Section 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.7

6.1: 1) $I = \$600$ 3) $A = \$3048$ 5) $P = \$1800$ 7) $A = \$872$
9) $r = .11$ 11% 11) $\$1760$ 13) $\$7440$ 15) $\$219070$

6.2 1) $A = \$11542.52$ 3) $A = \$5647.77$
5) B pays more $r_{\text{EFF}} = .0513$ at Bank A. $r_{\text{EFF}} = .0523$ at Bank B
7) $A = \$12702.00$ 9) $t = 8.66$ years 11) $P = \$151,257.12$
13) $r_{\text{EFF}} = .07397$ 7.397% 15) 17.28 million people

6.3 1) $A = \$13954.01$ 3) $A = \$15904.47$ 5) $m = \$20578.26/\text{quarter}$
7) $m = \$6438.02/\text{quarter}$
9) $\$25000$ paid today is better: $A = \$38002.64$
for $\$400$ paid monthly $A = \$35872.42$
11) $A = 112552.26$

6.4 1) $P = \$1,177,953.55$ 3) $P = \$12043.34$ 5) $m = \$2149.21/\text{month}$
7) $m = \$1,976.80/\text{month}$ 9) $P = \$37907.87$ so leasing is better
11) $m = \$3645.04/\text{month}$

6.5 1) $m = \$1123.06$ 3) $P = \$171907.63$
5) $P = \$5579.64$ 7) $P = \$11680.01$
9) $m = \$333.85/\text{month}$ 10) $m = \$2177.77/\text{month}$
11) $A = \$305421.70$ 12) $m = \$2479.37$
13) $P = P_1 + P_2 = 447.70 + 471.48 = \919.18
15) $P = P_1 + P_2 = 435.48 + 806.45 = \1241.94
17) a) $A = \$30535.40$ b) $m = \$720.63/\text{month}$

6.6 1. D 3. F 5. E 7. D 9a. B 9b. F 11. F
 13. A 15. B 17. A 19. B

- 6.7 1) $\$870 = A$ 2) $81,596$ 3) $\$1190.50 = m$
 4) $\$1755.93 = m$ 5) $P = \$12156.72$
 6) $\$160383.25$ 7) $m = \$289.28$
 8) $P = 16290.63$ loan so value = $\$19290.63$
 9) $P = \$2085.33$ 10) $P = \$688,675.54$
 11) $\$497897.83$
 12) $\$928.94$ if $r = .07$ or $\$1077.95$ if $r = .05$
 13) $A = \$3447.31$
 14) a) $m = \$1643.90$ b) $\$128451.61$
 15) $\$9898.48$
 16) $PV = P = \$1213539.16$ $FV = A = \$5745936.81$
 17) $\$6669.70 = m$ 18) $\$767123287.67$
 19) $m = \$2375.25$ 20) $109,619$
 21) $\$5805.92 = A$ 22) $P = \$2138.67$
 23) $\$1823.88$ 24) $\$276.68 = m$
 25) If leasing $P = \$7835.35$, and the down payment of $\$750$ brings the present value to $\$8585.33$
 Purchasing for $\$8000$ is cheaper.
 26) Cost in 5 years is $\$20615.73$
 Sinking fund deposit $m = \$833.79$ / quarter
 27) Western Bank $r_{EFF} = .0597$ or 5.97%
 City Bank is better
 28) $m = \$404.57$
 29) $\$300$ per month for 5 years: $P = \$14900.82$
 $\$500$ per month for 3 years: $P = \$16026.59$ is better
 30) 10.19 years = t
 31) $\$177692.68 = A$
 32) $\$20000 + \500 / month for 10 years: $P = \$61210.74$
 $\$12000 + \1000 / month for 5 years: $P = \$61318.43$ better
 33) $P = \$16884.77$
 34) Monthly payment $\$2204.21$
 Total paid $\$793515.60 = (2204.21)(360)$
 Interest $\$368515.6 = 793515.60 - 425000$
 35) 15.53 years