**Solutions to Quiz Problems – Chapter 4**

1.   C = $1,398.43

  = $173,589.97

(1+) = $174,674.91

1. (1+r) r = 0.00689566 = monthly rate

APR = (0.00689566) (12) = 8.2748%

EAR = (1.00689566)12 – 1 = 8.595955%

1. FV =  + $50,000 (1 + )300 = $691,306.76
2.  = $99,363.81

$99,363.81 = $33,829.50 $99,363.81 = $29,003.35

 (1.08)14 (1.08)16

$33,829.50 + $29,003.35 = $62,832.85

 C = $7,340.73

1.  t = 138.98, meaning 139 months of payments

180 – 139 = 41, so you will pay off your mortgage 41 months sooner.

(1+) = $14,810.31

 $35,000 – $23,000 = $35,000 - $18,106.86 = $16,893.14

 

 You should lease because it has a lower PV cost.

 $35,000 – X = $14,810.31

 

 X = $25,645.69 = break-even resale price

1. A. $5,000 (1.06)10 = $8,954.24 EAR = 6%

B. $5,000  = $9,070.09 EAR = - 1 = 6.1364%

C. $5,000  = $9,110.14 EAR = - 1 = 6.1831%

D. $5,000  = $9,110.59 EAR = - 1 = 6.1837%

1.  C = $830.02

$35,000 (.065/12) = $189.58

$830.02 - $189.58 = $640.44

1.  (1.06) = $145,907.21

 = $229,398.42

PVDelayed Annuity = $229,398.42 = $135,780.57

 (1.06)9

1. Regular Car: $3.50/gallon / 25 miles/gallon = $0.14/mile

 ($0.14/mile) (400 miles/week) = $56/week

Hybrid Car: $3.50/gallon / 35 miles/gallon = $0.10/mile

 ($0.10/mile) (400 miles/week) = $40/week

 Hybrid Car saves $16/week

  = $5,093.93

 Since the Hybrid Car costs $4,000 more but saves $5,093, it is more economical