

TEST #2

- 1) Housing costs have been increasing at 10.2% per year compounded annually for the past 12 years. A house with a \$210,000 value now would have had what value 12 years ago?
- 2) Note A pays 10% compounded monthly, and note B pays 10.2% compounded quarterly. Which is the better investment and why?
- 3) Construct the amortization schedule for a \$1500 debt that is to be amortized in 6 equal quarterly payments at 1.25% interest per quarter on the unpaid balance?
(Include a column for payments, interest, principal, and unpaid balance).
- 4) A car salesman tells you that you can buy the car of your dreams for \$2,500 down and \$300 a month for 60 months. If interest is 12% compounded monthly,
 - a) what is the selling price of the car? _____
 - b) How much interest will you pay during the first year? _____
- 5) A family has a \$100,000, 30 year mortgage at 9.66% compounded monthly. What is the unpaid balance after
 - a) 5 years? _____
 - b) 30 years? _____
 - c) How much interest will they pay in 30 years? _____
- 6) A company establishes a sinking fund to upgrade a plant in 15 years at an estimated cost of \$2,500,000.
 - a) How much should be invested each month into an account paying 8.25% compounded monthly? _____
 - b) How much interest will the account earn in the 15 years? _____
- 7) An individual deposits \$2,000 each year for 25 years into an IRA. When she retires immediately after the 25th deposit, the IRA is worth \$220,000.
 - a) Find the interest rate earned by the IRA over the 25 year period leading up to retirement. _____
 - b) Assume that the IRA continues to earn the interest rate found in part (a). How long can the retiree withdraw \$30,000 per year? _____
- 8) If you sell your car to someone for \$4000 and agree to finance it at 1% per month on the unpaid balance.
 - a) How much should you receive each month to amortize the loan in 18 months? _____
 - b) How much interest will you receive? _____
- 9) If \$1 had been placed in a bank account at the end of year 1200 and forgotten until the end of the year 2000, how much would be in the account at the end of the year 2000,
 - a) if the money earned 2% simple interest? _____
 - b) if the money earned 2% compounded annually? _____
- 10) How long will it take money to double if it is invested at:
 - a) 14% compounded annually? _____
 - b) 14% compounded daily? _____(compute answers in years to three decimal places)

- 11) If you buy a 26 week T-bill with a maturity value of \$10,000 for \$9,693.78, what annual simple rate of interest will you earn? (Express answer as a percentage, correct to three decimal places.)

- 12) You can afford quarterly deposits of \$750 into an account that pays 9% compounded quarterly. How long will it be until you have \$20,000 to buy a car?

Answer Key

Testname: M118-TEST1-PRACTICE TEST.TST

1) \$65,469.67

2) Note B is better (effective rate of note A is 10.47% and note B is 10.60%)

3)	Payment	Interest	Principal	Balance
				\$1500.00
	\$261.05	\$18.75	\$242.30	\$1257.70
	\$261.05	\$15.72	\$245.33	\$1012.37
	\$261.05	\$12.65	\$248.40	\$763.97
	\$261.05	\$9.55	\$251.50	\$512.47
	\$261.05	\$6.41	\$254.64	\$257.83
	\$261.05	\$3.22	\$257.83	0

4) a) $\$13,486.51 + \$2500 = \$15,986.51$

b) \$1505.67

5) a) \$96,350.57

b) 0

c) \$206,918.95

6) a) \$7,066.01

b) \$1,228,118.39

7) a) 10.74%

b) 15 years

8) a) \$243.93/month

b) \$390.71

9) a) \$17.00

b) \$7,588,176.25

10) a) 5.290 years

b) 4.951 years

11) 6.318%

12) 22 quarters, or 5 years and 2 months