AChor/MBF3C **Name: _____**
Date: _____

Worksheet 6-4: Future Value with Compound Interest

Review:

For compound interest, the formula _____ is used to calculate *A*, the amount or final amount of a loan or an investment, where

A is the _____ or _____

i is the _____ per _____

P is the _____ or _____

n is the _____of _____

The formula _____ is used to calculate the value of *i*, where

r is the _____ interest rate

N is the number of _____ per _____.

The formula _____ is used to calculate the value *n*, where

y is the number of _____

N is the number of _____ per _____.

Practice:

1. Mr. Yan invested $2000 for 5 years at 8%, compounded semi-annually.

(a) How much will his investment worth at the end of 5 years?

r= *y*= *N*= *P*= *i*= *n*=

(b) How much interest will he earn?

A= *P*=

Assigned Work: WS 6-4; p. 434 #10, #12-15

2. When Jeremy was born, his parents invested $3000 at 4%, compounded quarterly to pay for his education. What was the investment worth on Jeremy's tenth birthday?

r= *y*= *N*= *P*= *i*= *n*=

3. To buy a house, Sandra borrowed $12 000 for 10 years at 6%, compounded monthly. Her sister, Denise, borrowed $12 000 for her house at 6.4%, compounded quarterly for 10 years. How much more interest did Denise have to pay than Sandra did?

4. Mr. Chong-Yen is considering two investment plans. Which one should he take? Justify your choice.

Option 1: $5000 for 4 years at 4%, compounded semi-annually
Option 2: $5000 for 4 years at 3.6%, compounded quarterly

Answers: **1.** (a) $2960.49, (b) $960.49**; 2.** $4466.59**; 3.** $810.01 (22642.77 – 21832.76)**;**
4. Option 1, $87.6 more interest (5858.30 – 5770.70)**.**