MAT 1053 - MODULE 7.1 PRE-CLASS WORK myUTSA ID: _____

MODULE 7.1 - SIMPLE AND COMPOUND INTEREST

LEARNING OBJECTIVES

Important Topics of this Section:

- Simple interest
- Compound interest

Simple Interest

- Write down the formula and define each variable for a Simple Interest

How It Works Follow these steps when you calculate the amount of simple interest.

Maturity Value (or Future Value)

- Write down the formula and define each variable for Simple Interest for Single Payments.

- Write down the formula and define each variable for Interest Amount for Single Payments.

Future Value Calculations with No Variable Changes

- Write down the formula and define each variable for Number of Compound Periods For Single Payments.

- Write down the formula and define each variable for Compound Interest For Single Payments.

How It Works Follow these steps to calculate the future value of a single payment.

Integer Compounding

How It Works Follow these steps to compute the number of compounding periods.

MODULE 7.1 - CLASS NOTES

1. Consider $1,000 is being invested for 25 years at 10% interest.
   a. Determine the amount in the account after 10 years if the account earns simple interest.

   b. Determine the amount in the account after 10 years if the account earns interest compounded annually.

Calculate the missing information in for the table below.

	Interest Amount	Principal or Present Value	Interest Rate	Time
2.	?	$130,000.00	8%	9 months
3.	$4,000.00	?	2% per month	8 months
4.	$1,437.50	$57,500.00	? per year	4 months
5.	$103.13	$1,250.00	9%	? months

6. You are sitting in an office at your local financial institution and the bank officer says to you, "We will make you a great deal. If we advance that line of credit and you borrow $20,000 today, when you want to repay that balance in 3 months you will only have to pay us $20,168.77, which is not much more!" Before answering, you decide to evaluate the statement. Calculate the simple interest rate that the bank officer used in her calculations.

7. If you invested $5,000 for 10 years at 9% interest compounded quarterly, how much money would you have?

8. Calculate the amount of money in the account using the table below.

Principal	Interest Rate	Term
$7,500	8% compounded quarterly	3 years

9. Tabitha estimates that she will need $20,000 for her daughter's postsecondary education when she turns 18. If Tabitha is able to save up to $8,500, how far in advance of her daughter's 18th birthday would she need to invest the money at 7.75% compounded semi-annually?