Student: ___________________________ Class: ____________________ Date:______________

Decision Making in Finance: Using Credit
VI.D Student Activity Sheet 10: Buying a Losing Investment

1. Christina is considering buying a new car with a sticker price of $23,599. Her credit union offers her a three-year car loan at 5.99% annual percentage rate (APR) with 10% as a down payment. Find the monthly payment.

Variable	Definition of Variable	Value in Christina's Loan Situation
N	number of compounding periods	
I%	annual interest rate	
PV	principal, or present value	
PMT	amount of each regular payment	
FV	future value	
P/Y	number of payments per year	
C/Y	number of compounding periods per year	

2. Christina's car will be worth $14,250 in three years. What will the total cost of the car be at the end of the loan?

What is the benefit of this type of financing? What is the cost of this type of financing?

3. Christina considers a different option. The dealership offers 0% down and 0% APR for two years. The car will be worth $17,629 in two years.

What will the monthly payments be under these conditions? How much will the total cost of the car be if Christina takes this loan?

Which loan should Christina take? Why?

4. Christina has an offer to lease the same car for three years at $349 per month. The lease has a balloon payment of $1,200 at the end of three years. What is the total cost of the lease?

5. What interest rate is Christina being charged for leasing the car?

Variable	Definition of Variable	Value in Christina's Leasing Situation
N	number of compounding periods	
I%	annual interest rate	
PV	principal, or present value	
PMT	amount of each regular payment	
FV	future value	
P/Y	number of payments per year	
C/Y	number of compounding periods per year	

Should Christina take the lease? Why or why not?

6. The car manufacturer offers a lease-to-purchase option at 1.9% APR for three years. At the end of this option, Christina can keep the vehicle by paying the depreciated value or walk away for a fee of $150. What is the monthly payment of the lease-to-purchase option? What is the total cost of the purchase option if she walks away?

Variable	Definition of Variable	Value in Christina's Lease-to-Purchase Situation
N	number of compounding periods	
I%	annual interest rate	
PV	principal, or present value	
PMT	amount of each regular payment	
FV	future value	
P/Y	number of payments per year	
C/Y	number of compounding periods per year	

7. **REFLECTION:** Which alternative should Christina choose: the loan, the lease, or the purchase option? Why?

8. Christina works for a law firm and makes $42,350 a year. Based on standard budgeting used in Student Activity Sheet 8 and using your choice in Question 7, can she afford the car? Explain your answer.

9. **EXTENSION:** Wanda wants to buy a new car for $34,650. The bank will give her a car loan for five years at 4.5% APR with $0 down payment. What will her monthly payment be?

Variable	Definition of Variable	Value in Wanda's Loan Situation
N	number of compounding periods	
I%	annual interest rate	
PV	principal, or present value	
PMT	amount of each regular payment	
FV	future value	
P/Y	number of payments per year	
C/Y	number of compounding periods per year	

   a. Wanda's car will be worth $18,935 in five years. The manufacturer offers a lease-to-purchase option at 7% APR. At the end of the purchase option, Wanda can keep the vehicle by paying the depreciated value or walk away for a fee of $180. What will her monthly payment be?

Variable	Definition of Variable	Value in Wanda's Lease-to-Purchase Situation
N	number of compounding periods	
I%	annual interest rate	
PV	principal, or present value	
PMT	amount of each regular payment	
FV	future value	
P/Y	number of payments per year	
C/Y	number of compounding periods per year	

b. What is the total cost for the loan? What is the total cost for the purchase option if Wanda walks away for $180? Which alternative should Wanda choose: the loan or the purchase option? Why?

10. EXTENSION: Research websites that calculate and compare all three methods of financing vehicles. Select a vehicle, determine the monies involved in each type of financing, and make a decision regarding which is the best option. Prepare a short presentation to share with the class.