# Group Project Worksheet

Financing a Car

Group Members:

This worksheet must be turned in with the summary paper. Complete each question, and if you are asked to make a computation, show all of your work. Write neatly and legibly. Points may be deducted if answers are incorrect, incomplete, or messy.

### Finding a Loan

Buying a car is an important decision. In this project, you will consider different strategies for financing a new car. Let's assume that you cannot buy the car outright and will need a car loan.

- 1. Determine the price of the "car of your dreams" by going to a new car dealership or looking in the newspaper. Find out the tax and the license fees for the car.
  - Description of car: \_\_\_\_\_\_
  - Where did you find this car? \_\_\_\_\_\_
  - Price (before taxes and fees):
  - Tax: \_\_\_\_\_
  - Fees: \_\_\_\_\_
  - Total (selling price): \_\_\_\_\_\_
- 2. Contact two financial institutions (bank, credit union, etc.). Find out the rates for 3-year, 4-year, 5-year auto loans with monthly payments. Also find out what percentage down payment is required.
  - (a) Financial institution:

Loan Length	APR	Percentage Down
3 years		
4 years		
5 years		

(b) Financial institution:

Loan Length	APR	Percentage Down
3 years		
4 years		
5 years		

3. State which financial institution you have chosen to use and why.

- 4. Calculate the amount of the loan you will need (selling price of the car minus the down payment). Using your answer to the previous question, find the payments for the 3-year, 4-year, and 5-year loan. Also, calculate the amount of money that you will need before you can take possession of the car (down payment, tax, and fees).
  - (a) Loan Amount: \_\_\_\_\_
  - (b) 3-year loan
    - PMT:
    - Money needed to take possession of the car:
  - (c) 4-year loan
    - PMT:
    - Money needed to take possession of the car:
  - (d) 5-year loan
    - PMT:
    - Money needed to take possession of the car:

5. Complete the amortization schedule for the first year of payments on each of the following: (a) the 3-year loan, (b) the 4-year loan, and (c) the 5-year loan. Include the computations for the first row of the 3-year loan amortization schedule in the space provided below.

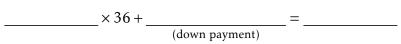
(a)	Payment Amount	Interest Paid	Principal Repaid	New Principal
	1			
	2			
	3			
	4			
	5			
	6			
	7			
	8			
	9			
	10			
	11			
	12			

#### Financing a Car

#### Math 1030 Group Project

	1		1
Payment Amount	Interest Paid	Principal Repaid	New Principal
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
	T D . 1	D' ' 1D '1	N. D 1
	Interest Paid	Principal Repaid	New Principal
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
	2 3 4 5 6 7 8 9 10 11 12 Payment Amount 1 2 3 4 5 6 7 8 9 10 7 8 9 10 11	1  1    2	1

- 6. Calculate the total amount that you will pay in total for each of the auto loans (including down payment).
  - (a) Total paid for the 3-year loan:



(b) Total paid for the 4-year loan:

$$\underline{\qquad} \times 48 + \underline{\qquad} = \underline{\qquad}$$

(c) Total paid for the 5-year loan:

## Leasing a Car

Suppose that instead of buying the car, you decide to lease the car. Let's weigh the pros and cons of buying a car on a loan versus leasing a car.

- 1. If you lease a car, what costs will you incur? Find the amount you would have to put down if you were to lease the car you chose in part I for three years. Also find the monthly lease payment and figure the total amount you will pay over the life of the lease.
  - Down payment: \_\_\_\_\_\_
  - Monthly lease payment: \_\_\_\_\_\_
  - Other fees: \_\_\_\_\_\_
  - Total cost: \_\_\_\_\_\_
- 2. Estimate the number of miles you drive in a month. (Don't just guess, do some work to make the estimate really mean something.) Will you have to pay extra for your lease if you drive too many miles? If so, how much will that cost over the life of the lease?

3. Estimate what the car will be worth at the end of the three years. Explain.

4. Compare the costs of having the car (excluding gas, maintenance, etc.) for three years if you take out a lease for that time with the cost of the three-year loan. Remember that to make these situations comparable, you must take into consideration that, at the end of the 3-year loan, you will own the car as an asset but, with the lease, you will not.

5. What are the merits/drawbacks of the different loans and the lease? Explain.