DUE: 6 March @ 2355

Assignment: Build a decision tree/graph based on the following information:

Buy or Lease a new car.

There are 5 new cars to choose from.

You have $1,000 per month of discretionary funds to use:

- This includes food, personal 'entertainment' (movies, date night, etc.), other 'living' expenses (i.e., electric, fuel).
- Cost of insurance (for car) we will use a flat cost of $200.00 for all to keep it easy.
- Cost of the lease/financing

Students will go to https://www.truecar.com/ and choose any 5 cars of their liking and will determine the MSRP for each car. Each car must be from a different 'brand' and model, no duplicates. (To keep things simple, only the vehicle's MSRP will be used for the remainder.)

Students will then build a Decision Tree/graph that uses all 5 of the vehicles chosen.

The tree will include the cost of the vehicle when buying for 48 (6%), 60 (5%), or 72(4%) months. Student's interest rate will be based on years financed. The tree will include the cost of the vehicle when leasing for 48, 60, or 72 months.

Students will calculate the monthly cost of the car as in the following example:

Cost of vehicle: $25,000 (ignoring dealer prep, taxes, registration, etc. using MSRP only.)

Down payment: $2500. (All students will use a $2,500 dollar down payment (for either leasing or buying).)

Lease

Lease cost of vehicle after down payment: $23,500

Lease has a fixed 10% fee on total Balance ($23,500 * 0.10) = $2,350.00

Total leased amount = $23,500 + $2,350 = $25,850.00

Leasing will have a fixed monthly cost based on the years leased for.

- 48 months (25,850/48 = $538.54)
- 60 months (25,850/60 = $430.83)
- 72 months (25,850/72 = $359.03)

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A lease earns no equity. At the end of the lease, the student owns nothing of the vehicle and returns it to the dealership. (ignoring other possible end of lease fees/charges).

Purchase

Finance cost after down payment: $23,500

Total Financed amount = $23,500

Financing will have a fixed monthly cost based on the years financed for.

- 48 months (23,500/48 = $551.90) @ (6% APR)
- 60 months (23,500/60 = $443.47) @ (5% APR)
- 72 months (23,500/72 = $367.66) @ (4% APR)

At the end of the financing, the student owns 100% of the vehicle at its current market value.