**Follow Up Component**

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 **TO BUY OR NOT TO BUY (CAR)**

**Directions**:

* If you have time left over in class on Tuesday, you may start this part in your group.
* You may want to reference the first part of your project. Use the formula sheet given out in class.
* This is INDIVIDUAL work. While you are encouraged to work together on this second part, make sure all work submitted reflects your own understanding.
* You must SHOW ALL WORK (including set-ups) to receive full credit. Pay attention to details.
* Don’t forget to include dollar signs.
* **Do not round within an expression, wait until the end of each part.**
* **Round money values to the closest cent.**
1. You borrowed $7500 at an APR of 9%, which you are paying off with monthly payments

over 3 years.

1. Calculate the monthly payment.
2. Determine the total payment over the life of the loan.
3. Determine the total interest. (Just subtract the principal.)
4. Pete borrowed $ 6110 and agreed to repay the loan over 5 years at 26% APR. This loan does not have a prepayment penalty.
5. Determine Pete’s monthly payment.
6. Calculate the total that he will have paid back at the end of the 5 years.
7. Determine the total interest. (Just subtract the principal.)
8. If Pete **pays back the loan early** with his **9th** payment after having made all preceding eight monthly payments on time,
9. Calculate how much Pete has already paid in his 8 monthly payments he has made so far.

(You need to use the payment amount you calculated in # 6(a).)

1. Calculate the **unearned interest** according to the “Rule of 78” at the end of month 9. (You need to use the interest you calculated in # 6(c) above as well as other information you used in # 6.)

[*Hint: k* = 51]

1. Calculate the **money still owed** (which is the amount that Pete has to send as his 9th payment. You need to use the payment amount you calculated in #6(a) as well as the unearned interest from # 7(b).)
2. Pete complains that in his final payment he still owes almost as much as he originally took out ($6110) even though he has already paid $1463.52 to the bank over the past 8 months. The bank assured him that there was no mistake in their calculations. Explain briefly why the amount that Pete has to pay back in his 9th payment as a lump sum can still be very close to the principal of $6110 he took out under the loan terms he agreed to. (i,e. what causes this “injustice”?)

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1. After paying off the loan in a lump sum with the 9th payment, how much money will Pete have paid the bank in total?

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1. How much money did Pete save by paying his loan back early?