

Name: \_\_\_\_\_  
Teacher: \_\_\_\_\_  
Class/ Block: \_\_\_\_\_  
Date: \_\_\_\_\_

### **Lesson 4: Determining Loan Repayment**

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Please answer each question. Clearly identify your final answer!!  
No work or explanation = No Credit

1. Your parents need to replace their roof and take out a home improvement loan to pay for it. The total costs of the repair will be \$25,655; they found a bank that will provide them with the 3 year loan at 8.25% compounded monthly.

a. What is the future value of the loan (how much will you actually pay)?

**\$32,831.60**

b. How does the bank earn in interest?

**\$7,176.60**

c. What will the monthly payments be?

**\$911.98**

2. Kaitlyn just purchased a new home and really wants new furniture. She goes to the local furniture store, Hobbs Furniture Outlet, and is able to furnish her new home for \$6,900. She takes a personal loan from her bank at 6.77% compounded monthly for a total of 3 years.

a. How much will she actually pay back?

**\$8,449.02**

b. How much does the bank earn in interest?

**\$1,549.02**

c. What will the monthly payments be?

**\$234.69**

3. Tony just graduated from college and need to buy a car. After looking at his monthly budget, he realized that he has to lower his expectations because he needs to build up his credit. So he found a used 2010 Toyota Corolla with 21,000 miles for \$9,800 and he doesn't need to make a down payment; he's approved for a 4 year loan at 3.5% interest rate.

a. What is the future value of the loan?

**\$11,270.38**

b. What will the monthly payments be?

**\$234.79**

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4. Aaron is starting a new job in 2 weeks and desperately needs to purchase a car. He's found the perfect car for \$13,599 and has qualified for a loan. He must make a \$2,500 down payment and get a loan for the remaining amount. The loan will be for 4 years at 3.65% compounded monthly.

a. What will be the initial amount (present value) of the loan?

**\$11,099**

b. What is the future value of the loan (how much will he actually pay)?

**\$12,840.87**

c. What will his monthly payments be?

**\$267.51**

5. Now let's suppose that Aaron wants to put down \$4,000 as a down payment in an effort to reduce his monthly payments. Using the same values in #4, find the following:

a. What is the future value of the loan now that he's made a \$4,000 down payment?

**\$9,599**

b. How much will the bank earn in interest now?

**\$1,506.46**

c. How much will his monthly payments be if the bank allows him to pay the loan off in 3 years?

**\$297.44**