8.3: Simple Interest Installment Loans

Objective: SWBAT calculate the monthly payment, total amount repaid, and finance charge on an installment loan.

When you obtain a ==simple interest installment loan==, you must pay finance charges for the use of the money. You repay the loan with equal monthly payments, where part of each payment is used to pay the interest on the unpaid balance of the loan. And the remaining part of the payment is used to reduce the balance.

Usually, you repay the amount finance plus the finance charge in equal monthly payments. The amount of each monthly payment depends on the amount financed, the number of payments, and the ==annual percentage rate== (APR). The annual percentage rate is an index showing the relative cost of borrowing money.

In order to solve the problems in this section, make sure that you keep the following formulas in mind.

Important Questions	What formulas do I use?
How do I find the **monthly payment**?	Monthly Payment = Amount of Loan/$100 X Monthly Payment for a $100 Loan
How do I calculate the **total amount paid**?	Total Amount Repaid = # of Payments X Monthly Payment
How do I find the **finance charge**?	Finance charge = Total Amount Repaid – Amount Financed

Warm Up:

What do you think a bank looks for in a client who wants to take out a personal loan?

Example 1:

Carla Hunt obtained an installment loan of $1,800.00 to purchase some new furniture. The annual percentage rate is 8 percent. She must repay the loan in 18 months. What is the finance charge?

Step 1: Find the monthly payment.

    Amount of Loan ÷ $100 × Monthly Payments for a $100 Loan

      $1,800.00   ÷ $100 × $5.91   = **$106.38** ← **Monthly Payment**

Step 2: Find the total amount repaid.

    Number of Payments × Monthly Payment

        18   × $106.38   = **$1,914.84** ← **Amount Repaid**

Step 3: Find the finance charge.

    Total Amount Repaid – Amount Financed

      $1,914.84   – $1,800.00   = **$114.84** ← **Finance Charge**

Example 2:

Jason and Alex Andrews are purchasing a side-by-side refrigerator with an installment loan that has an APR of 12 percent. The refrigerator sells for $1,399.99. The store financing requires a 10 percent down payment and 12 monthly payments. What is the finance charge?

Step 1: Find the amount financed.

    Selling Price – Down Payment

   $1,399.99 - (0.10 X $1,399.99) **= $1,259.99** ← **Amount Financed**

Step 2: Find the monthly payment.

    Amount of Loan ÷ $100 × Monthly Payments for a $100 Loan

      $1,259.99   ÷ $100 × $8.88   = **$111.89** ← **Monthly Payment**

Step 3: Find the total amount repaid.

    Number of Payments × Monthly Payment

        12   × $111.89   = **$1,342.68** ← **Amount Repaid**

Step 4: Find the finance charge.

    Total Amount Repaid – Amount Financed

      $1,342.68   – $1,259.99   = **$82.69** ← **Finance Charge**

Self Check Answers:

1. $73.76   2. $1,770.24   3. 170.24
4. $800.00 5. $3,200 6. $103.36 7. $3,720.96 8. $520.96