CHAPTER 11
ASK MY INSTRUCTOR
EXAMPLE 1

The cash price for a new washer and dryer for Toshio Nakamura’s new apartment was $1250. Toshio made a $100 down payment and financed the balance on a 24-month fixed payment installment loan. The monthly payments are $50.36. Instead of making his 12th payment, Toshio decides to pay off the loan.

a) Determine the APR on the installment loan.
b) How much interest will Toshio save by paying off the loan early?
c) What is the total amount due to pay off the loan?
EXAMPLE 2

Shiing Shen Chern’s credit card company determines his minimum monthly payment by adding all new interest to 1% of the outstanding principal. The credit card company charges an interest rate of 0.036993% per day. On March 13, Shiing uses his credit card to purchase airline tickets for his family for $2500. He makes no other purchases during March. Use the information and the rule that minimum payments are rounded up to the nearest dollar to answer parts a and b below.

a) Assuming Shiing had no new interest, determine Shiing’s minimum payment due on April 1, his billing date.

b) On April 1, instead of making the minimum payment, Shiing makes a payment of $400. Assuming there are no additional charges or cash advances, determine Shiing’s minimum payment due on May 1.
EXAMPLE 3

The balance on Ramon Felipe’s credit card on January 12, his billing date, was $348.78. For the period ending February 12, Ramon had the following transactions below.

a) Find the average daily balance for the billing period.

b) Find the finance charge to be paid on February 12. Assume an interest rate of 1.2% per month.

c) Find the balance due on February 12.

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 17</td>
<td>Charge: Restaurant meal</td>
<td>$61.78</td>
</tr>
<tr>
<td>January 27</td>
<td>Payment</td>
<td>$170.00</td>
</tr>
<tr>
<td>February 4</td>
<td>Charge: Lawn ornaments</td>
<td>$33.64</td>
</tr>
<tr>
<td>February 11</td>
<td>Charge: Microwave Oven</td>
<td>$203.89</td>
</tr>
</tbody>
</table>
A couple found a house selling for $114,500. The taxes on the house are $1200 per year, and insurance is $320 per year. They are requesting a conventional loan from the local bank. The bank is currently requiring a 15% down payment and 3 points, and the interest rate is 10%. The couple’s gross monthly income is $4850. They have more than 10 monthly payments remaining on a car, boat, and furniture. The total monthly payments for these items is $420. Their bank will approve a loan that has a total monthly mortgage payment of principal, interest, property taxes, and homeowners’ insurance that is less than or equal to 28% of their adjusted monthly income.

a) Determine the required down payment.

b) Determine the cost of the 3 points.

c) Determine 28% of their adjusted monthly income.

d) Determine the monthly payments of principal and interest for a 20-year loan.

e) Determine their total monthly payment including homeowners’ insurance and taxes.

f) Determine whether the couple will qualify for the 20-year loan.

g) Determine how much of the first payment on the loan is applied to the principal.
EXAMPLE 5

On the April 5 billing date, Michaelle Chappell had a balance due of $903.84 on her credit card. From April 5 through May 4, Michaelle charged an additional $373.37 and made a payment of $1000.

a) Find the finance charge on May 5, using the previous balance method. Assume that the interest rate is 1.6% per month.

b) Find the new balance on May 5.