Cost of Credit

The ability of a person to obtain a loan is called **credit.** When you obtain a loan, you are borrowing someone else's money, and normally you must pay to do so. The **cost of credit** for a loan is the difference between the total amount due and the loan proceeds.

Cost of Credit

$$\text{Cost of credit} = \text{total amount due} - \text{loan proceeds}$$

EXAMPLE 3   Finding the Cost of Credit

You purchase a refrigerator for $950.89 plus 6% sales tax. The appliance store offers an installment loan that allows you to pay for the refrigerator by making 12 equal monthly payments of $95.75. What is the cost of credit for this loan?

SOLUTION

Because the loan has 12 equal monthly payments of $95.75, the total amount due is

$$\text{Total amount due} = 12(95.75) \qquad \text{12 monthly payments}$$
$$= \$1149.00.$$

The loan proceeds are found by adding the cost of the refrigerator to the 6% sales tax.

$$\text{Loan proceeds} = \boxed{\begin{array}{c}\text{Cost of}\\\text{refrigerator}\end{array}} + \boxed{\begin{array}{c}\text{Sales}\\\text{tax}\end{array}}$$

$$= 950.89 + (0.06)(950.89) \qquad \text{6\% sales tax}$$
$$= 950.89 + 57.05$$
$$= \$1007.94$$

Finally, the cost of credit for this loan is

$$\text{Cost of credit} = \text{total amount due} - \text{loan proceeds}$$
$$= 1149.00 - 1007.94$$
$$= \$141.06.$$

So, by borrowing the money, you pay $141.06 more than if you had paid cash for the refrigerator.

✓ Checkpoint

Help at *Math*.and**YOU**.com

What is the cost of credit for each loan?

a. You buy a computer for $1599.99 plus 7% sales tax. The electronics store offers an installment loan that allows you to pay for the computer by making 24 equal monthly payments of $74.20.

b. You borrow $250,000 with a home mortgage. You pay $1342.05 toward the mortgage each month for 30 years.