

## Calculating Simple Interest Rates Answer Key

**Directions:** In this assignment, you will use the simple interest rate formula to compare the amount of interest and the total amount paid on two different car loans.

$$I = P * r * t$$

### Loan 1.

Amount Borrowed: \$20,000  
Interest Rate (APR): 3.25%  
Length of Loan: 60 months

#### *Show your work for Loan 1.*

- **P** is the principal amount, \$20,000
  - **r** is the interest rate, 3.25% per year, or in decimal form,  $3.25/100=0.0325$
  - **t** is the time involved, 5 year(s)
- Equation:  $20,000 \times 0.0325 \times 5$

**Total Interest Paid:** \$3,250

**Total Amount Paid:** \$23,250

### Loan 2.

Amount Borrowed: \$20,000  
Interest Rate (APR): 4.1%  
Length of Loan: 48 months

#### *Show your work for Loan 2.*

- **P** is the principal amount, \$20,000
  - **r** is the interest rate, 4.1% per year, or in decimal form,  $4.1/100=0.041$
  - **t** is the time involved, 4 year(s)
- Equation:  $I = 20,000 \times 0.041 \times 4$

**Total Interest Paid:** \$3,280

**Total Amount Paid:** \$23,280

What are the differences in these two loans? What can you conclude from those differences?

There is only \$30 difference in the two loans, even though the interest rate is higher on Loan 2. The difference is the length/duration of the loan. It pays to compare interest rates and duration of loans, even when one interest rate is lower than the other.

Note: The monthly payments might be a factor when deciding which loan is best for the borrower. Loan 1 would have monthly payments of \$ 387.50, and Loan 2 would have monthly payments of \$485.