## **TRS 92: Writing Equations**

1. The relationship between the number of payments *P* made and the balance *B* (in dollars) of a \$10,800 car loan can be represented by the following table.

P: Number of Monthly Payments	B: Amount of Loan Balance (\$)
0	10,800
2	10,200
4	9,600
6	9,000

a. Based on the table, write a linear equation for the amount of the car loan balance **B** as a function of the number of monthly payments **P**. Use function notation and show your work.

- b. What is the slope of the equation you wrote in **part a**? Explain this value in the context of the problem.
- c. What is this vertical intercept of the equation you wrote in **part a**? Explain this in the context of the problem.

- The Saucy Soda Factory is currently experimenting with a new pickle flavored drink. Researchers tested the drink on ordinary consumers. Initially, there were 522.4 gallons of pickle drink. After 26 days of testing, there were 301.4 gallons left.
  - a. Define the independent and dependent variables.

b. Write the linear equation that models this situation, using function notation. Show your work.