Slope-Intercept Form *Applications*

Problems that involve an initial starting value and a constant rate of change
can be modeled using a linear equation written in slope-intercept form (*y = mx + b*).

Important Parts!	Rate of change = _____ Initial Value = _____
	Independent Variable = _____ Dependent Variable = _____

1 Manny is having new carpet installed in his home. The flooring company charges $195 for installation, then $3.50 per square foot of carpet. Identify your variables, then write an equation to represent the total cost Manny will pay for the new carpet.

a) What is the rate of change?

b) What is the initial value?

c) What is the independent variable?

d) What is the dependent variable?

2 A taxi charges $2.50 per mile in addition to a $2 transportation fee. Identify your variables, then write an equation to represent the total cost to take a taxi cab.

a) What is the rate of change?

b) What is the initial value?

c) What is the independent variable?

d) What is the dependent variable?

3 The cost to make a long-distance phone call is 20 cents per minute plus a $1.75 connection fee. Identify your variables, then write an equation to represent the total cost to make a phone call.

a) What is the rate of change?

b) What is the initial value?

c) What is the independent variable?

d) What is the dependent variable?

4 A skydiver starts at an altitude of 3,500 feet and begins to descend at a rate of 12 feet per second. Identify your variables, then write an equation to represent the altitude of the skydiver.

a) What is the rate of change?

b) What is the initial value?

c) What is the independent variable?

d) What is the dependent variable?

Directions: Read each problem, write an equation, then solve using your equation.

5 The Peach Festival charges $5 for admission then $1.25 per pound of peaches picked. If Savannah went to the festival and picked 2.4 pounds of peaches, how much did she pay in total at the festival?

6 A blue whale is approximately 3 tons (6,000 pounds) at birth. If it gains approximately 200 pounds each day during its first year, find the weight of a 30-day old blue whale.

7 A catering company charges $95 plus $12.75 per plate of food. If the cost to cater a party was $656, how many people were at the party?

8 While on a hike, Vera reached the peak of a mountain 3,000 feet above sea level. If she climbed down the mountain at a steady rate of five feet per minute, find her location after three hours.

9 The parking garage of a hotel is located 25 feet below ground. If Rob enters the elevator at the parking garage and it rises at a rate of four feet per second, find the height of the elevator after one minute.

10 Tom works in an appliance store. He has a fixed salary of $75 per day, plus 10% commission on all his sales. If he wishes to make $200 in a single day, find the total value of the merchandise he must sell that day.