Name: _____ Date: _____

BLM 10–8

Section 10.2 Math Link

This worksheet will help you with the Math Link on page 387.

When any object falls, it picks up more and more speed as it falls. In fact, a falling object increases its speed by about 10 m/s for every second it falls.

1. You are going to determine the speed at which an object hits the ground, depending on the starting speed and the amount of time that the object falls. Examine the first two rows of the table. Fill in the next three rows.

Starting Speed (m/s)	Amount of Time the Object Falls (s)	Speed at Which It Hits the Ground (m/s)
0	5	$10 \times 5 = 50$
5	4	$5 + (10 \times 4) = 45$
10	1	
0	12	
15	3	

2. A stone is dislodged from the side of a canyon and falls with an initial speed of 5 m/s. It hits the water below it at a speed of 45 m/s. Write an equation where 5 m/s is the starting speed, 45 m/s is the speed at which the stone hits the water, and t represents the amount of time the stone falls.

_____

3. Solve the equation to determine what amount of time the stone fell.