Exponential Decay

$\left(y = a \cdot b^x \right)$

Exponential Decay

... art ... 100 milligrams of medicine. Each hour the
... centration of the medicine is 75% of the amount present the
hour before.

Hour	Milligrams	Process
	100	
		$100(1 - .25)^1$
		$( ) (1 - .25)^2$

A. Use recursion to complete the table.

B. When will the amount reach 50 mg.?

C. Find a recursive or explicit equation to model the decay.

D. Use your equation to find the amount left after 10 hours.

... scientist uses a model to find the projected bison ... in a national park. Her data is shown in the table below. **Find the population if it is decreasing by 5% a year.**

Year	Population	Process
	600	

Is the model linear or exponential?

Determine the rate of change.

Find a recursive or explicit equation to model the situation.

Patient Medication   (add Labels on Axes)   Bison Population

100
80
60
40
20
0
1 2 3 4 5 6 7 8 9 0

660
640
620
600
580
560
540
520
500
480
460
440
420
400
0 1 2 3 4 5