Math 1 Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**4-4 Quick Practice** Date\_\_\_\_\_\_\_\_\_

1. You drink a coffee with 140 mg of caffeine. Each hour, the caffeine in your system decreases by about 15%. Write a recursive rule that can be used to calculate the amount of caffeine in your system then give the practical domain and range for this situation.

 Recursive formula:

 Domain:

 Range:

2. The foundation of your house has about 1,500 termites. The termites grow at a rate of about 3.4% per day. How long until the number of termites doubles?

3. In 1985, there were 155 cell phone subscribers in the small town of Centerville. The number of subscribers increased by 65% per year after 1985. How many cell phone subscribers were in Centerville in 1994?

4. The population of Columbus, Ohio, can be modeled by *P(t)*=822553(1.06)*t* where *t* is the number of years since 1990. What was the population in 1990? By what percent did the population increase by each year?