**More Geometric Sequences**

1. Congratulations! You have just won first prize in a poetry writing contest. If you take the $100 you won and invest it in a mutual fund earning 5% interest per year, about how long will it take for your money to triple?
2. You open up a new investment account and make an initial deposit of $1,200. Your account earns 6% interest per year. How long will it take for your money to double?
3. You have a choice. You can be paid $200 up front for working for a family friend for two weeks (14 days). Or, you can be paid a penny on the first day, and each day after your payment will double. (2 pennies on the second day, 4 pennies on the third day, etc.) What payment plan is best? Explain your answer.
4. John’s current salary is $40,000 per year. His annual pay raise is always a percent of his salary. What would his salary be if he received four consecutive 4% pay increases?
5. Suppose you drop a tennis ball from a height of 2 meters. On each bounce, the ball reaches a height that is 75% of its previous height. What height does the ball reach on its third bounce?
6. In a research laboratory, bacteria of a certain species will double in number each day. If the number of bacteria at the beginning of one day is 350, how many bacteria will there be 5 days later?