Practice for 6.3 Geometric sequences

The following problems will help you practice the material you learned today. Once you are finished check your solutions. Once done, you can work on your WeBWorK homework.

1. Determine the tenth term and the sum of the first ten terms and the sum of an infinite number of terms for this geometric sequence: 3, 3/2, ¾, …

2. $\displaystyle\sum_{k=1}^{7}-3(0.1)^{k}$

3. $\displaystyle\sum_{j=1}^{\infty}4\left(-\frac{2}{3}\right)^{j}$

4. In the example of the bouncing ball dropped from a height of 9 feet and bouncing up two-thirds of the previous distance on each bounce, what is the total distance it has traveled after bouncing ten times? If the ball could bounce indefinitely, what would be the distance traveled?

5. Now you get really brave in saving for your trip and each day you deposit twice the amount you did on the previous day, starting with $1.00 on day 1. How much will you deposit on the 30th day? What is the total amount in the account on day 30?