Finite Geometric Sums Practice Problems   **Calc 2**   **Due Never**

Each problem is worth 0 points. For full credit provide complete justification for your answers.

1. Evaluate $\displaystyle\sum_{n=0}^{20} \frac{1}{7^n}$.

2. Evaluate $\dfrac{2}{3} - \dfrac{2}{9} + \dfrac{2}{27} - \dfrac{2}{81} + \dfrac{2}{243} - \dfrac{2}{729}$.

3. Evaluate $\displaystyle\sum_{i=1}^{12} 2\cdot\left(\tfrac{3}{4}\right)^i$.

4. Express the sum $1 + \dfrac{1}{3} + \dfrac{1}{9} + \ldots + \dfrac{1}{3^n}$ in terms of n.

5. Express the sum $5 + 10 + 20 + 40 + \ldots + 5\cdot 2^n$ in terms of n.

6. How many terms does it take before the series $\dfrac{1}{2} + \dfrac{1}{4} + \dfrac{1}{8} + \ldots + \dfrac{1}{2^n}$ is within one one-millionth of totaling 1?