Math 4 Series/Sequence Quiz Review

1. Give the first 6 terms of the sequence: $\begin{cases} m_1 = 4 \\ m_n = 3m_{n-1} + 2 \end{cases}$

2. Fill in the blanks of the following geometric series:

_____, -6, _____, _____, -162

3. Expand to find the sum. $\sum_{i=2}^{5} 4i - 7$

4. Write the following in sigma notation: $9 + 4 + 1 + 0 + 1 + 4 + 9 + 16 + 25$

5. a) Evaluate: $\sum_{i=3}^{9} 18\left(\frac{2}{3}\right)^{i-1}$ b) {3, 5.5, 8, ……., 98}

6. How many terms of the series $g_n = 5 \cdot 2^{n-1}$ are needed so the sum of the sequence is 83,886,075?

7. Solve: $6x^3 + 28x^2 - 10x = 0$