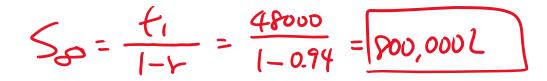
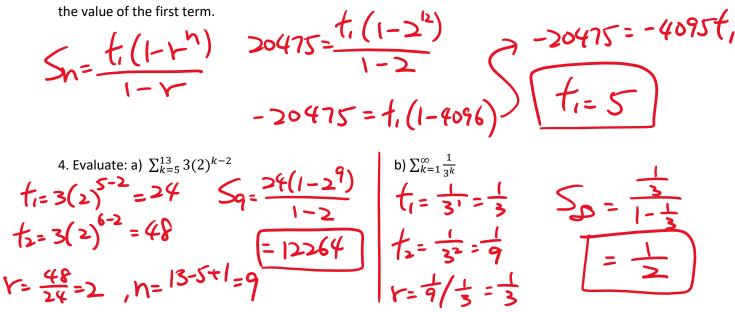
## Ch. 6 to 7.3 Review 2

1. Determine the number of terms in the geometric sequence:  $\frac{1}{128}, \frac{1}{32}, \frac{1}{8}, \dots, 2048$  $t_{n}=t_{i}(\mu)^{n}$ 262144 = 4'' $19 - 10^{-1} 5 = 9 = 10^{-1}$  $2048 = \frac{1}{120}(4)^{-1}$ 

2. A new well produces 48000 L of water in the first month. If the volume of water pumped decreases by 6% each month, determine the total volume of water, in litres, that will be pumped from the well before it runs dry. r=0.94



3. In a geometric series, if the sum of the first 12 terms is 20475 and the common ratio is 2, determine the value of the first term.



5. Laura invests in a bond which pays interest at the rate of 2.5% per year compounded weekly. After 10 years the value of the bond has increased to \$1267.28. What was the original value of the bond?

A= A. (1+ =)"  $|267.28 = A_0 \left( 1 + \frac{a_{025}}{52} \right)^{52(10)}$   $A_0 = \frac{1}{52}$ 1267.28=A. (1.284)

6. Mr. H worked for SD41 for 5 years. His annual salary was \$38000 during his first year. Each year his salary increased by 2% over the previous year's salary. Suppose he was able to keep half of his salary for a house he would like to purchase that requires a down payment of \$100,000. Can he afford it?

