

USE FORMULAS!!

1. Find the sum. NO DECIMALS.
(Reduce the fraction!)

$$\sum_{k=1}^8 \left(\frac{1}{3}\right)^{k-1}$$

2. Find the sum of the first ten powers of 5.

3. Find the sum of the series: $-8 + 4 - 2 + \dots - 1/32$.

4. Show that $S_n = \frac{a_1 - ra_n}{1-r}$ represents the sum of a geometric series.

(Hint: derive from geometric sum formula you know)

5. A new car purchased for \$25,000 loses 15% of its value each year. After how many years will its value be half of its original value? (Round to nearest tenth of a year).