

6. The first three terms of a geometric sequence are x , $x + 2$, and $2x + 1$. Find all possible values for a_1 , a_2 , and a_3 .

7. A new car purchased for \$35,000 loses 15% of its value each year. Use the geometric sequence n th term formula to calculate, to the nearest tenth of a year, after how many years its value will be half of the original purchase price.

8. Find the sum of the first ten positive powers of 5.

9. Find the exact sum, in simplest fractional form: $\sum_{k=1}^8 \left(\frac{1}{3}\right)^{k-1}$

10. Find the sum of the series: $-8 + 4 - 2 + \dots - \frac{1}{32}$.