Non calculator

1. Find the sum of the first 120 positive even integers. 1. _____

2. Find the 9^{th} term in a geometric sequence if $a_4 = 108$ and $a_6 = 972$. 2. _____

3. Find the sum of the infinite geometric series: $30 + 6 + 6/5 + 6/25 + \ldots$ 3. _____

4. Find the n^{th} term of the geometric sequence if: $a_2 = 4$ and $a_6 = \frac{1}{64}$. 4. _____

5. Find a_n for the arithmetic sequence with $a_1 = 8$, $d = -3$. 5. _____

6. Find the 4^{th} term of $(x+2)^6$ 6. _____

7. Find $\frac{(x+3)!}{(x-2)!}$ 7. _____

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8. Find the partial sum of $\sum_{n=0}^{37} \frac{15 - \frac{n}{2}}{5}$. 8. _____

9 . What is the 8th term in the expansion of $(2x - 5)^{11}$ 9. _____

10. Find the formula for a_n for the arithmetic sequence: $a_3 = 52$, $a_{10} = 136$. 10. _____

11. Evaluate the summation: $\sum_{n=0}^{\infty} 2(0.015)^n$ 11. _____

12. Find the sum of the coefficients of $(3x - y)^5$. 12. _____

13. Evaluate the summation: 13. _____

$$\sum_{n=0}^{7} 3\left(\frac{5}{7}\right)^n$$