

SHOW YOUR WORK!!! (3 points each)



1. Write a recursive formula for the sequence 2, 7, 12, 17, ...

2. Write an explicit formula for the nth term of the arithmetic sequence 40, 33, 26, 19, ...

Find the indicated term in each arithmetic sequence in problems 3 – 5.

3. 16th term for the recursive formula $t_1 = 13$; $t_n = t_{n-1} + 10$

4. t_{34} for the sequence 7, 3, -1, -5, ...

5. t_{19} given $t_2 = 8$ and $t_5 = 17$

6. 124 is the _____ term of -2, 5, 12, ...

7. Given the 8th term of an arithmetic sequence is -28 and the common difference is -5, find the first term of the sequence.

8. Find the 2 arithmetic means between -3 and -18.

Quiz: Geometric Series & Sequence

Use the formula for an arithmetic series to find each sum.

9. $4 + 7 + 10 + 13 + 16 + 19 + 22 + 25$

10. $6 + 12 + 18 + \dots + 96$

11. S_{45} for the sequence $18 + 8 + (-2) + (-12) + \dots$

Evaluate.

12. $\sum_{n=1}^{30} (2n-1)$

13. $\sum_{k=1}^{21} (k^2 - 3k + 2)$

BONUS (3 points) YOU MUST SHOW ALL WORK!!!Find the first three terms of the arithmetic series described: $t_1 = 14$ $t_n = -85$ $S_n = -1207$