

EXTRA Practice #1 for Chp 9

1. Write the first 4 terms (show **ALL** work) of the sequence defined by:

a) $a_n = a_{n-1} + 10$
 $a_1 = -4; n \geq 2$

b) $a_n = 50 - 5n$

2. Evaluate:

a) $\sum_{k=1}^{41} k^2$

b) $\sum_{k=1}^{95} (7k - 2)$

c) $\sum_{k=1}^{30} (10k - 2k^2)$

3. Write an **explicit** formula for the nth term of the arithmetic sequence: 22,19,16,13,...

4. Write a recursive formula for the nth term of the sequence:
-11,-6,-1,4,...

5. Find the 65th term of the arithmetic sequence in which $a_{20} = -116$ and $a_{35} = 64$.

6. Find S_{74} for the arithmetic series
12+15+18+21+...

7. Find the 75th term of the sequence defined by 100,94,88,82,...

8. Evaluate the sum using the appropriate formula: $-9+(-6)+(-3)+\dots+2436$

***Find more problems similar to these and **PRACTICE** them!!! Don't forget to study for the review section...all of chapter 1 and the problem set material could be on the quiz.

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Answers:

- 1) A) -4,6,16,26,36
B) 45,40,35,30
- 2) a) 23821
b) 31730
c) -14260
- 3) $a_n = 22 - 3(n - 1)$
- 4) $a_1 = -11 \quad a_n = a_{n-1} + 5$
- 5) $a_{65} = 424$
- 6) 8991
- 7) $a_{75} = -344$
- 8) 990216

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