Assignment

Pre-Calculus B 120

Check In: Arithmetic Sequences and Series

Answer all questions in the spaces provided.

1. Answer the following questions about the arithmetic sequence 40, 37, 34, 31, ….

   a. Find t_{60}.

   b. Find t_n.

2. Find the missing terms in each of the following arithmetic sequences.

   a. _____, 3, 7, _____, _____

   b. 8, _____, _____, _____, −12

3. In an arithmetic sequence , $t_{30} = 118$. If $d = 4$, find the first four terms of the sequence.

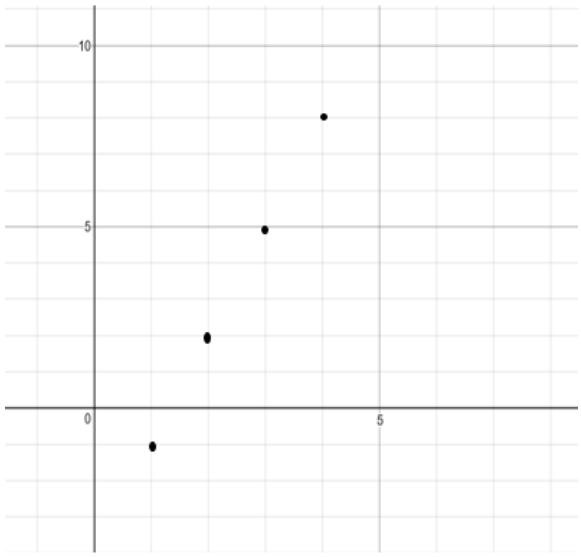
4. How many terms are in the sequence 5, −1, −7, −13, …, −349?

5. In an arithmetic sequence, $t_7 = 37$ and $t_{10} = 22$. Find t_{25}.

6. In an arithmetic sequence, $t_{10} = 32$. The sum of t_3 and t_8 is equal to 19. Find the first four terms of the sequence.

7. The first four terms of the sequence −1, 2, 5, 8, 11, 14, 17…are graphed as follows.

Term number	1	2	3	4
Term value	−1	2	5	8



Explain why the points cannot be joined.

8. Find the sum of the first 36 terms of the sequence, 2, 6, 10, 14, 18….

9. Evaluate each of the following:

a.

$$\sum_{n=1}^{6}(3n+1)$$

b.

$$\sum_{n=1}^{52}(2n-3)$$

10. Find the sum of the arithmetic series 4 + 7 + 10 +13 + 16 + … + 166.

11. Find the sum of the odd positive numbers less than 80.

12. A worker's salary is $52 000 in her fifth year of employment. In her twelfth year, her salary will be $64 600. In what year will her salary be $ 77 200? Assume that she gets an equal raise each year.