Name: _____

Arithmetic Sequences and Series

1) Find the number of terms in 13, 19. . . 205

2) Find the 31^{st} term of an arithmetic sequence whose 11^{th} term is 38 and the 16^{th} term is 73.

3) An arithmetic sequence consists of 50 terms of which 3^{rd} term is 12 and the last term is 106. Find the 29^{th} term.

4) If the 3^{rd} and the 9^{th} terms of an arithmetic sequence are 4 and – 8 respectively, which term of this arithmetic sequence is zero?

5) The 17^{th} term of an arithmetic sequence exceeds its 10^{th} term by 7. Find the common difference.

6) Which term of the arithmetic sequence: 3, 15, 27, 39 . . . will be 132 more than its 54^{th} term?

7) How many multiples of 4 lie between 10 and 250?

8) Determine the arithmetic sequence whose third term is 16 and the 7^{th} term exceeds the 5^{th} term by 12.

9) Find the 20^{th} term from the last term of the arithmetic sequence: 3, 8, 13. . . 253

10) The sum of the 4^{th} and 8^{th} terms of an arithmetic sequence is 24 and the sum of the 6^{th} and 10^{th} terms is 44. Find the first three terms of the arithmetic sequence.

11) Find the sum of the first 22 terms of the arithmetic sequence: 8, 3, −2 .

12) If the sum of the first 14 terms of an arithmetic sequence is 1050 and its first term is 10, find the 20^{th} term.

13) How many terms of the arithmetic sequence: 24, 21, 18 . . . must be taken so that their sum is 78?

14) Find the sum of the first 1000 positive integers

15) Find the sum of the first 24 terms of the list of numbers whose n^{th} term is given by $a_n = 3 + 2n$

16) Find the sum of the following arithmetic sequences:

    1) 2, 7, 12. . . to 10 terms.

    2) −37, −33, −29. . . to 12 terms.

    3) 0.6, 1.7, 2.8. . . to 100 terms.