 Name_____

Practice for Quiz - Arithmetic Series

Date_____

Evaluate the related series of each sequence.

1) 7, 10, 13, 16

2) –2, 3, 8, 13

3) 0, 5, 10, 15

4) 28, 34, 40, 46, 52, 58

Rewrite each series as a sum.

5) $\sum_{n=1}^{4} n^2$

6) $\sum_{k=1}^{6} k(k-1)$

7) $\sum_{a=1}^{4} (30 - a^2)$

8) $\sum_{m=1}^{6} (500 - m^2)$

Evaluate each arithmetic series described.

9) $\sum_{i=1}^{30} (6i + 3)$

10) $\sum_{n=1}^{10} (4n - 12)$

11) $\sum_{n=1}^{10} (2n - 8)$

12) $\sum_{i=1}^{5} (6i + 2)$

13) $\sum_{m=1}^{15} (6m + 1)$

14) $\sum_{k=1}^{45} (6k - 9)$

Determine the number of terms *n* in each arithmetic series.

15) $a_1 = 31,\ a_n = 130,\ S_n = 966$

16) $a_1 = 1,\ a_n = -75,\ S_n = -740$

17) $\sum_{k=1}^{n} (7 - 6k) = -260$

18) $\sum_{k=1}^{n} (6k - 16) = 1550$

Answers to Practice for Quiz - Arithmetic Series

1) 46
2) 22
3) 30
4) 258
5) 1 + 4 + 9 + 16
6) 0 + 2 + 6 + 12 + 20 + 30
7) 29 + 26 + 21 + 14
8) 499 + 496 + 491 + 484 + 475 + 464
9) 2880
10) 100
11) 30
12) 100
13) 735
14) 5805
15) 12
16) 20
17) 10
18) 25