ADVANCED MATH Name_____

Arithmetic Series WS #1

Date_____ Period____

Evaluate the related series of each sequence.

1) 12, 14, 16, 18

2) 12, 14, 16, 18, 20, 22, 24

Evaluate each arithmetic series described.

3) $a_1 = 16,\ a_n = 356,\ n = 35$

4) $a_1 = 35,\ a_n = 134,\ n = 12$

5) $a_1 = 33,\ d = 10,\ n = 9$

6) $a_1 = -3,\ d = 2,\ n = 45$

7) $19 + 25 + 31 + 37..., \ n = 14$

8) $(-11) + (-16) + (-21) + (-26)..., \ n = 20$

9) $\sum_{m=1}^{11} (5 - 4m)$

10) $\sum_{m=1}^{20} (8m - 16)$

11) $\sum_{m=3}^{47} (7 - 9m)$

12) $\sum_{m=5}^{49} (5m - 12)$

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

13) $a_1 = -16,\ a_n = -68,\ S_n = -588$

14) $a_1 = -37,\ a_n = -135,\ S_n = -1290$