

Arithmetic Series

Evaluate the related series of each sequence.

1) 27, 37, 47, 57, 67, 77

2) -9, -15, -21, -27

Evaluate each arithmetic series described.

3) $a_1 = -23$, $a_n = -48$, $n = 6$

4) $a_1 = 26$, $a_n = 178$, $n = 20$

5) $a_1 = 4$, $a_n = 22$, $n = 7$

6) $a_1 = 10$, $a_n = 70$, $n = 11$

7) $a_1 = 8$, $a_n = 71$, $n = 10$

8) $a_1 = 15$, $a_n = 103$, $n = 12$

9) $a_1 = 31$, $a_n = 263$, $n = 30$

10) $a_1 = 22$, $a_n = 64$, $n = 8$

11) $a_1 = 45$, $a_n = 285$, $n = 25$

12) $a_1 = -10$, $a_n = -52$, $n = 7$

$$13) \sum_{i=1}^8 (3i - 7)$$

$$14) \sum_{i=1}^{13} (2i + 7)$$

$$15) \sum_{m=1}^{15} (2m - 10)$$

$$16) \sum_{i=1}^{14} (2i + 4)$$

$$17) \sum_{n=1}^{11} (2n + 4)$$

$$18) \sum_{k=1}^{11} (4k - 14)$$

Determine the number of terms n in each arithmetic series.

$$19) a_1 = 34, a_n = 115, S_n = 745$$

$$20) a_1 = 10, a_n = 108, S_n = 2950$$

$$21) a_1 = 23, a_n = 219, S_n = 6050$$

$$22) a_1 = 28, a_n = 70, S_n = 392$$

$$23) a_1 = 4, a_n = 312, S_n = 7110$$

$$24) a_1 = 10, a_n = 100, S_n = 550$$