Arithmetic Sequences and Series

Block:____ Mark OutOf 16_____

Find the common difference, the term named in the problem, and the simplified explicit formula.

1) 21, 30, 39, 48, ...
Find a_{30}

Given the recursive formula for an arithmetic sequence find the first five terms.

2) $a_n = a_{n-1} + 9$
$a_1 = -2$

Given the explicit formula for an arithmetic sequence find the common difference, the first five terms, and the term named in the problem.

3) $a_n = -4 - 4n$
Find a_{37}

Given two terms in an arithmetic sequence find the term named in the problem.

4) $a_{10} = 105$ and $a_{40} = 375$
Find a_{26}

Given a term in an arithmetic sequence and the common difference find the term named in the problem.

5) $a_{33} = 61,\ d = 3$
Find a_{22}

Evaluate the related series of each sequence.

6) 27, 35, 43, 51, 59, 67

Evaluate each arithmetic series described.

7) $\sum_{i=1}^{20} (4i + 2)$

8) $a_1 = 23,\ a_n = 103,\ n = 9$

9) $a_1 = 11,\ d = 4,\ n = 8$

10) $(-2) + 1 + 4 + 7...,\ n = 9$

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

11) $a_1 = 16,\ a_n = 82,\ S_n = 588$

Find the missing term or terms in each arithmetic sequence.

12) ..., −11, ___, ___, ___, 25, ...