

Arithmetic Sequences and Series

Block: _____ Mark Out Of 25 _____

Determine the number of terms n in each arithmetic series.

1) $a_1 = 9, a_n = 37, S_n = 345$

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

2) $a_1 = -39, d = -100$

Find a_{25} **Find the common difference, the term named in the problem, and the explicit formula.**

3) 40, 32, 24, 16, ...

Find a_{20} **Evaluate the related series of each sequence.**

4) -9, -15, -21, -27, -33, -39

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

5) $a_{15} = -167$ and $a_{39} = -407$

Find a_{23}

Evaluate each arithmetic series described.

$$6) \sum_{k=2}^9 (10k - 16)$$

$$7) a_1 = 26, a_n = 62, n = 10$$

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

$$8) a_{21} = 116, d = 5$$

Find a_{33}

Evaluate each arithmetic series described.

$$9) a_1 = 13, d = 9, n = 35$$

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

$$10) a_n = 26 - 4n$$

Find a_{40}

Given the recursive formula for an arithmetic sequence find the common difference and the term named in the problem.

$$11) a_n = a_{n-1} - 8$$

$$a_1 = 16$$

Find a_{33}

Evaluate each arithmetic series described.

$$12) 14 + 19 + 24 + 29 \dots, n = 19$$