

Arithmetic Sequences WS #1

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Determine if the sequence is arithmetic. If it is, find the common difference, the 52nd term, and the explicit formula.

1) $-1, -3, -9, -27, \dots$

2) $2, 6, 10, 14, \dots$

Determine if the sequence is arithmetic. If it is, find the common difference, the term named in the problem, and the explicit formula.

3) $10, 3, -4, -11, \dots$

Find a_{26}

4) $-34, -14, 6, 26, \dots$

Find a_{32}

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

5) $a_n = a_{n-1} + 30$

$a_1 = 25$

Find a_{24}

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

$a_1 = 0$

Find a_{40}

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

7) $a_2 = -31, d = -7$

Find a_{22}

8) $a_2 = -8, d = 4$

Find a_{36}

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

9) $a_{17} = -3180, d = -200$

Find a_{39}

10) $a_{26} = -2537, d = -100$

Find a_{35}

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

11) $a_{14} = 136$ and $a_{38} = 328$

Find a_{31}

12) $a_{13} = -64$ and $a_{37} = -208$

Find a_{23}

Find the missing term or terms in each arithmetic sequence.

13) ..., 25, ____, ____, ____, 9, ...

14) ..., $\frac{4}{9}$, ____, ____, ____, ____, $-\frac{11}{9}$, ...

15) ..., $-\frac{7}{4}$, ____, ____, ____, ____, ____, $-\frac{43}{4}$, ...