

Q3HW1 - All work on looseleaf. Show all work.

Date_____ Period_____

Determine if the sequence is arithmetic. If it is, find the common difference d .

1) $-40, -140, -240, -340, \dots$

2) $-4, -104, -204, -304, \dots$

Determine if the sequence is arithmetic. If it is, find the common difference d and the next 3 terms.

3) $4, -2, -8, -14, \dots$

4) $-40, -20, 0, 20, \dots$

5) $3, -6, 12, -24, \dots$

6) $-33, -40, -47, -54, \dots$

Determine if the sequence is arithmetic. If it is, find the term named in the problem.

7) $-33, -24, -15, -6, \dots$

Find a_{36}

8) $12, 2, -8, -18, \dots$

Find a_{37}

9) $12, -88, -188, -288, \dots$

Find a_{24}

10) $-25, -28, -31, -34, \dots$

Find a_{33}

11) $0.5, 2.2, 3.9, 5.6, \dots$

Find a_{29}

12) $19, 23, 27, 31, \dots$

Find a_{21} **Given two terms in an arithmetic sequence find the term named in the problem.**

13) $a_{11} = 89$ and $a_{38} = 251$

Find a_{29}

14) $a_{10} = 152$ and $a_{39} = 732$

Find a_{30} **Given a term in an arithmetic sequence and the common difference find the term named in the problem.**

15) $a_{20} = 36, d = 4$

Find a_{26}

16) $a_{10} = -1783, d = -200$

Find a_{31} **Evaluate each arithmetic series described, that is, find the partial sum of the series.**

17) $a_1 = 7, a_n = -5, n = 7$

18) $a_1 = -1, a_n = 9, n = 6$

19) $a_1 = 10, a_n = 120, n = 12$

20) $a_1 = 37, a_n = 127, n = 11$

21) $a_1 = 7, d = 4, n = 10$

22) $a_1 = 9, d = 3, n = 20$

23) $(-2) + 0 + 2 + 4 + \dots, n = 9$

24) $(-1) + 2 + 5 + 8 + \dots, n = 14$

Determine the number of terms n in each arithmetic series.

25) $a_1 = 1, a_n = 9, S_n = 25$

26) $a_1 = 25, a_n = 97, S_n = 793$