

Arithmetic Series and Sequences WS #1

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Find the next three terms in each sequence.

1) 33, 3, -27, -57, -87, ...

2) 26, 46, 66, 86, 106, ...

3) 37, 57, 77, 97, 117, ...

4) -2, -6, -10, -14, -18, ...

Find the tenth term in each sequence.

5) $\frac{15}{4}$, 3, $\frac{5}{2}$, $\frac{15}{7}$, $\frac{15}{8}$, ...

6) -2, 1, 6, 13, 22, ...

7) 10, 6, 4, 3, $\frac{5}{2}$, ...

8) 4, 16, 36, 64, 100, ...

Write the explicit formula for each sequence.

9) -23, -27, -31, -35, -39, ...

10) 36, 46, 56, 66, 76, ...

11) -30, -26, -22, -18, -14, ...

Given the first term and the common difference of an arithmetic sequence find the first five terms.

12) $a_1 = 16, d = -100$

13) $a_1 = -40, d = 6$

14) $a_1 = -28, d = 2$

15) $a_1 = 28, d = 8$

Given the second term and the common difference of an arithmetic sequence find the first five terms.

16) $a_2 = 16, d = -20$

17) $a_2 = -13, d = 8$

18) $a_2 = -208, d = -200$

19) $a_2 = 13, d = 9$

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

20) $a_n = 4 + 7n$

21) $a_n = 8 - 9n$

22) $a_n = -3 - 30n$

23) $a_n = 34 - 10n$

Given the explicit formula for an arithmetic sequence find the first five terms and the 52nd term.

24) $a_n = 41 - 10n$

25) $a_n = -28 - 10n$

26) $a_n = -9 - 4n$

27) $a_n = -45 + 20n$

Find the missing term or terms in each arithmetic sequence.

28) ..., -25, ____, -21, ...

29) ..., 2, ____, 7.8, ...

30) ..., 29, ____, ____, 41, ...

31) ..., -27, ____, ____, -12, ...

32) ..., 40, __, __, __, 60, ...

33) ..., -36, __, __, __, -44, ...

34) ..., -31, __, __, __, __, 19, ...

35) ..., 7, __, __, __, __, 42, ...

36) ..., 1, __, __, __, __, __, -2, ...

37) ..., $-\frac{2}{5}$, __, __, __, __, __, $\frac{38}{5}$, ...