

Unit 6: Representations of Linear Relations  
PRE-TEST

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

1. 1, 1, 1, 1, ...	2. $-20, -13, -6, 1, \dots$
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Find the recursive formula for each of the following:

3. $-8, -17, -26, -35, \dots$	4. $18, -2, -22, -42, \dots$
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Find the explicit formula for each of the following:

5. $-20, -29, -38, -47, \dots$	6. $23, 26, 29, 32, \dots$
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Given the following arithmetic sequences answer each of the following:

7.  $-26, -126, -226, -326, \dots$

A. Find the next three terms	B. Find $a_{38}$	C. Find $a_{52}$
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8.  $-33, -29, -25, -21, \dots$

A. Find the next three terms	B. Find $a_{30}$	C. Find $a_{52}$
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Find the missing term or terms in each arithmetic sequence.

9. ..., 23, ____, 17, ...	10. ..., -6, ____, 194, ...
11. ..., 17, ____, ____, 8, ...	12. ..., -33, ____, ____, -48, ...
13. ..., -15, ____, ____, ____, -95, ...	14. ..., 19, ____, ____, ____, -17, ...
15. ..., 21, ____, ____, ____, ____, -29, ...	16. ..., -14, ____, ____, ____, ____, -29, ...
17. ..., -8, ____, ____, ____, ____, ____, -62, ...	18. ..., -13, ____, ____, ____, ____, ____, -587, ...

Evaluate the related series of each sequence.

19. 20, 28, 36, 44, 52, 60	20. 6, 9, 12, 15, 18, 21
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Evaluate each arithmetic series described.

21. $5 + 7 + 9 + 11 \dots, n = 12$	22. $28 + 35 + 42 + 49 \dots, n = 18$
23. $\sum_{k=1}^{10} (7k - 2)$	24. $\sum_{n=1}^{40} (5n)$
25. $a_1 = 2, d = 4, n = 10$	26. $a_1 = 23, d = 8, n = 8$