Unit 6: Representations of Linear Relations

POST TEST – Version A

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

1. $14, 10, 6, 2, \ldots$	2. $-5, -10, -15, -20, \ldots$

Find the recursive formula for each of the following:

3. $-23, -27, -31, -35, \ldots$	4. $-32, -42, -52, -62, \ldots$

Find the explicit formula for each of the following:

5. $-10, -6, -2, 2, \ldots$	6. $27, 30, 33, 36, \ldots$

Given the following arithmetic sequences answer each of the following:

7. $11, 9, 7, 5, \ldots$

A. Find the next three terms	B. Find a_{26}	C. Find a_{52}

8. $1, 3, 5, 7, \ldots$

A. Find the next three terms	B. Find a_{25}	C. Find a_{52}

Find the missing term or terms in each arithmetic sequence.

9. $\ldots, -1, \_\_\_, 17, \ldots$	10. $\ldots, 19, \_\_\_, 27, \ldots$
11. $\ldots, 19, \_\_\_, \_\_\_, 79, \ldots$	12. $\ldots, 2, \_\_\_, \_\_\_, 302, \ldots$
13. $\ldots, 39, \_\_\_, \_\_\_, \_\_\_, 47, \ldots$	14. $\ldots, 37, \_\_\_, \_\_\_, \_\_\_, 57, \ldots$
15. $\ldots, -34, \_\_\_, \_\_\_, \_\_\_, \_\_\_, -134, \ldots$	16. $\ldots, 13, \_\_\_, \_\_\_, \_\_\_, \_\_\_, 63, \ldots$
17. $\ldots, 39, \_\_\_, \_\_\_, \_\_\_, \_\_\_, \_\_\_, 219, \ldots$	18. $\ldots, 35, \_\_\_, \_\_\_, \_\_\_, \_\_\_, \_\_\_, 5, \ldots$

Evaluate the related series of each sequence.

19. $22, 26, 30, 34, 38, 42, 46$	20. $14, 23, 32, 41, 50, 59$

Evaluate each arithmetic series described.

21. $8 + 12 + 16 + 20 \ldots, n = 13$	22. $(-19) + (-26) + (-33) + (-40) \ldots, n = 13$
23. $\sum_{k=1}^{10}(4k - 3)$	24. $\sum_{n=1}^{6}(4n - 14)$
25. $a_1 = 10, d = 2, n = 11$	26. $a_1 = 0, d = 8, n = 9$

Unit 6: Representations of Linear Relations

POST TEST – Version B

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

1. $-26, -17, -8, 1, \ldots$	2. $-14, -9, -4, 1, \ldots$

Find the recursive formula for each of the following:

3. $-18, -20, -22, -24, \ldots$	4. $-29, -39, -49, -59, \ldots$

Find the explicit formula for each of the following:

5. $24, 14, 4, -6, \ldots$	6. $10, 16, 22, 28, \ldots$

Given the following arithmetic sequences answer each of the following:

7. $18, -182, -382, -582, \ldots$

A. Find the next three terms	B. Find a_{38}	C. Find a_{52}

8. $30, 33, 36, 39, \ldots$

A. Find the next three terms	B. Find a_{30}	C. Find a_{52}

Find the missing term or terms in each arithmetic sequence.

9. $\ldots, -13, \_\_\_, 187, \ldots$	10. $\ldots, -8, \_\_\_, -4, \ldots$
11. $\ldots, 4, \_\_\_, \_\_\_, -14, \ldots$	12. $\ldots, 19, \_\_\_, \_\_\_, 43, \ldots$
13. $\ldots, -35, \_\_\_, \_\_\_, \_\_\_, 5, \ldots$	14. $\ldots, -36, \_\_\_, \_\_\_, \_\_\_, -76, \ldots$
15. $\ldots, -39, \_\_\_, \_\_\_, \_\_\_, \_\_\_, -54, \ldots$	16. $\ldots, -36, \_\_\_, \_\_\_, \_\_\_, \_\_\_, -1, \ldots$
17. $\ldots, -40, \_\_\_, \_\_\_, \_\_\_, \_\_\_, \_\_\_, -10, \ldots$	18. $\ldots, 19, \_\_\_, \_\_\_, \_\_\_, \_\_\_, \_\_\_, 7, \ldots$

Evaluate the related series of each sequence.

19. $20, 25, 30, 35$	20. $18, 22, 26, 30$

Evaluate each arithmetic series described.

21. $(-5) + (-14) + (-23) + (-32) \ldots, n = 10$	22. $13 + 15 + 17 + 19 \ldots, n = 13$
23. $\sum_{k=1}^{15}(3k - 8)$	24. $\sum_{i=1}^{35}(8i - 1)$
25. $a_1 = 3, d = -6, n = 40$	26. $a_1 = 13, d = 10, n = 14$

Unit 6: Representations of Linear Relations

POST TEST – Version C

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

1. $-4, -11, -18, -25, \ldots$	2. $-4, 96, 196, 296, \ldots$

Find the recursive formula for each of the following:

3. $-16, -12, -8, -4, \ldots$	4. -1, 99, 199, 299, ...

Find the explicit formula for each of the following:

5. $-16, -10, -4, 2, \ldots$	6. $37, 237, 437, 637, \ldots$

Given the following arithmetic sequences answer each of the following:

7. $36, 66, 96, 126, \ldots$

A. Find the next three terms	B. Find a_{38}	C. Find a_{52}

8. $23, 20, 17, 14, \ldots$

A. Find the next three terms	B. Find a_{30}	C. Find a_{52}

Find the missing term or terms in each arithmetic sequence.

9. $\ldots, -16, \_\_\_, -36, \ldots$	10. $\ldots, 4, \_\_\_, 18, \ldots$
11. $\ldots, -23, \_\_\_, \_\_\_, -113, \ldots$	12. $\ldots, 34, \_\_\_, \_\_\_, 334, \ldots$
13. $\ldots, -30, \_\_\_, \_\_\_, \_\_\_, 10, \ldots$	14. $\ldots, -27, \_\_\_, \_\_\_, \_\_\_, 9, \ldots$
15. $\ldots, 27, \_\_\_, \_\_\_, \_\_\_, \_\_\_, -3, \ldots$	16. $\ldots, 18, \_\_\_, \_\_\_, \_\_\_, \_\_\_, -32, \ldots$
17. $\ldots, 13, \_\_\_, \_\_\_, \_\_\_, \_\_\_, \_\_\_, -107, \ldots$	18. $\ldots, -35, \_\_\_, \_\_\_, \_\_\_, \_\_\_, \_\_\_, -95, \ldots$

Evaluate the related series of each sequence.

19. $-43, -52, -61, -70, -79$	20. $10, 16, 22, 28, 34, 40$

Evaluate each arithmetic series described.

21. $38 + 47 + 56 + 65 \ldots, n = 13$	22. $11 + 18 + 25 + 32 \ldots, n = 19$
23. $\sum_{n=1}^{25}(4n - 4)$	24. $\sum_{i=1}^{15}(6i - 13)$
25. $a_1 = -16, d = -5, n = 15$	26. $a_1 = -8, d = -7, n = 6$