

Practice and Apply

Write the first four terms of each sequence defined by the given explicit formula.

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|------------------------------|------------------------------|
| 10. $t_n = 2n + 3$ | 11. $t_n = 4n + 1$ |
| 12. $t_n = -2n + 1$ | 13. $t_n = -4n - 1$ |
| 14. $t_n = 6n + 2$ | 15. $t_n = 5n - 1$ |
| 16. $t_n = -7n + 3$ | 17. $t_n = -4n + 8$ |
| 18. $t_n = 4n + 2$ | 19. $t_n = \frac{1}{2}n + 1$ |
| 20. $t_n = \frac{1}{4}n + 2$ | 21. $t_n = 8.75n + 3.67$ |
| 22. $t_n = 3.76n + 2.5$ | 23. $t_n = n^5$ |
| 24. $t_n = (-1)^n$ | 25. $t_n = -2n^2$ |

Write the first six terms of each sequence defined by the given recursive formula.

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| 26. $t_1 = 1$
$t_n = t_{n-1} + 3$ | 27. $t_1 = 2$
$t_n = t_{n-1} + 2$ |
| 28. $t_1 = 0$
$t_n = t_{n-1} - 4$ | 29. $t_1 = -6$
$t_n = -2t_{n-1} + 3$ |
| 30. $t_1 = 7$
$t_n = 4t_{n-1} + 1$ | 31. $t_1 = 10$
$t_n = 5t_{n-1} + 1$ |
| 32. $t_1 = 10$
$t_n = 3t_{n-1} + 1$ | 33. $t_1 = 8$
$t_n = 3t_{n-1} - 2$ |
| 34. $t_1 = -2.24$
$t_n = 1.2t_{n-1} + 2.2$ | 35. $t_1 = 3.34$
$t_n = 2.2t_{n-1} - 1$ |
| 36. $t_1 = \frac{1}{3}$
$t_n = \frac{1}{2}t_{n-1} + 2$ | 37. $t_1 = \frac{5}{7}$
$t_n = \frac{1}{5}t_{n-1} + \frac{1}{3}$ |

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for Exercises 38–41

For each sequence below, write a recursive formula and find the next three terms.

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|-----------------------|-----------------------|
| 38. 1, 5, 9, 13, ... | 39. 3, 9, 15, 21, ... |
| 40. 5, 9, 17, 33, ... | 41. 3, 7, 15, 31, ... |

Write the terms of each series. Then evaluate.

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|--|-----------------------------------|--|
| 42. $\sum_{k=1}^3 4$ | 43. $\sum_{k=1}^4 10$ | 44. $\sum_{j=1}^4 3j$ |
| 45. $\sum_{k=1}^3 4k$ | 46. $\sum_{k=1}^5 -2k$ | 47. $\sum_{k=1}^4 -5k$ |
| 48. $\sum_{k=1}^3 \frac{1}{2}k^2$ | 49. $\sum_{k=1}^5 \frac{1}{3}k^2$ | 50. $\sum_{m=1}^5 -\frac{1}{3}m^2 - m$ |
| 51. $\sum_{n=1}^3 -\frac{1}{4}n^2 + n$ | 52. $\sum_{j=1}^4 (2j + 3)$ | 53. $\sum_{k=1}^3 (-3k + 1)$ |
| 54. $\sum_{m=1}^4 (5m^2 + 1)$ | 55. $\sum_{k=1}^3 (k^2 + k + 1)$ | 56. $\sum_{k=1}^3 (2k^2 + 3k + 2)$ |