

Answers for Lesson 11-4 Exercises

1. $21 + 18 + 15 + 12 + 9 + 6 + 3$; 84
2. $(-5) + (-15) + (-25) + (-35) + (-45)$; -125
3. $100 + 99 + 98 + 97 + 96 + 95$; 585
4. $0.5 + 0.25 + 0 + (-0.25) + (-0.5) + (-0.75)$; -0.75
5. $17.3 + 19.6 + 21.9 + 24.2 + 26.5$; 109.5
6. $4.5 + 5.6 + 6.7 + 7.8 + 8.9 + 10 + 11.1$; 54.6
7. 32
8. -48
9. 264
10. 35
11. 4292
12. -146
13. $\sum_{n=1}^4 2n$
14. $\sum_{n=1}^8 (n + 7)$
15. $\sum_{n=1}^7 (n + 4)$
16. $\sum_{n=1}^{11} (3n - 2)$
17. $\sum_{n=1}^{15} 7n$
18. $\sum_{n=1}^5 -3n$
19. 5, 1, 9; 25
20. 5, -3, -11; -35
21. 6, 4, -1; 9
22. 5, 0, 0.8; 2
23. $9, \frac{8}{3}, \frac{40}{3}$; 72
24. 6, 15, 10; 75
25. sequence; infinite
26. sequence; finite
27. series; finite
28. series; infinite
29. sequence; infinite
30. series; finite
31. a. 270 chairs on each side, 390 chairs middle, 930 chairs total
 b. each side: $\sum_{n=1}^{20} (n + 3)$; middle: $\sum_{n=1}^{20} (n + 9)$
 c. \$46,950
32. a. 8; the formula for the corresponding sequence is $a_n = 3n + 7$. Solving $3n + 7 = 31$ for n shows that $n = 8$.
 b. 164

Answers for Lesson 11-4 Exercises (cont.)

33. a. 91

b. 83

34. a. $a_n = n + 1$

b. $\sum_{n=1}^9 (n + 1)$

c. 18 cans

d. No; no; 13 rows have 104 cans, 14 rows have 119 cans, 15 rows have 135 cans, and 16 rows have 152 cans. The number of rows would not be an integer for 110 cans or 140 cans.

35. 110

36. -765

37. 5150

38. -22

39. -0.6

40. 1,000,500

41. a. No; $75 + 25(6) = 225$, which is less than 500.

b. Answers may vary. Sample: Pro: spreading the cost over several years, con: calculators purchased first may be outdated by the time 500 calculators have been purchased; check students' work.

42. a–d. Check students' work.

43. 300

44. -200

45. 34

46. 37

47. $10x + 45y$

48. $45x - 210y$