

EXERCISES

Find the indicated sum of the arithmetic sequence (Evaluate each series),

1. $1 + 2 + 3 + \dots + 50$
 2. $2 + 4 + 6 + \dots + 50$
 3. $1 + 3 + 5 + \dots + 49$
 4. $2 + 4 + 6 + \dots + 2n$
 5. $-3 - 1 + 1 + 3 + \dots + 55$
 6. $-3 - 1 + 1 + 3 + \dots + (2n - 5)$
 7. $1 + 5 + 9 + \dots + 157$
 8. $1 + 5 + 9 + \dots + (4n - 3)$
 9. $2.1 + 4.5 + 6.9 + \dots + 59.7$
 10. $2.1 + 4.5 + 6.9 + \dots + (2.4n - 0.3)$
 11. $2.1 - 0.3 - 2.7 - \dots - 62.7$
 12. $2.1 - 0.3 - 2.7 - \dots - (2.4n - 4.5)$
 13. $2 - 4 - 10 - \dots - a_{20}$
 14. $2 - 4 - 10 - 16 - \dots - (6n - 8)$
 15. $\frac{1}{2} + \frac{1}{4} + 0 - \frac{1}{4} + \dots + a_{20}$
 16. $\frac{1}{2} + \frac{1}{4} + 0 - \frac{1}{4} + \dots + [-\frac{1}{4}(n - 3)]$
 17. $-\frac{1}{2} + \frac{1}{4} + 1 + \frac{7}{4} + \dots + a_{20}$
 18. $-\frac{1}{2} + \frac{1}{4} + 1 + \frac{7}{4} + \dots + \frac{1}{4}(3n - 5)$
 19. $\sum_{k=1}^{30} 5k$
 20. $\sum_{k=1}^n 5k$
 21. $\sum_{k=1}^{12} (9k - 6)$
 22. $\sum_{k=1}^n (9k - 6)$
 23. $\sum_{k=1}^{300} k$
 24. $\sum_{k=1}^n k$
 25. $\sum_{k=50}^{200} k$
 26. $\sum_{k=50}^n k$
 27. $\sum_{k=1}^{30} (\frac{3}{4}k - \frac{1}{2})$
 28. $\sum_{k=1}^n (\frac{3}{4}k - \frac{1}{2})$
 29. $\sum_{n=0}^{100} (\frac{1}{2} - \frac{3}{16}n)$
 30. $\sum_{n=50}^{100} n - \sum_{n=1}^{49} n$
31. If $\sum_{k=1}^{12} [a + (k - 1)d] = 630$ and $\sum_{k=1}^{20} [a + (k - 1)d] = 1770$, find a and d .
32. A theater has 50 rows of seats. There are 25 seats in the first row, 31 seats in the second row, 37 seats in the third row, and so on. How many seats are there in the theater ?
33. An object is dropped from a plane. The object falls 16 feet during the first second. It falls 48 feet during the second second. It falls 80 feet during the third second. It falls 112 feet during the fourth second. How many feet will it fall in 15 seconds ?
34. An object is dropped from a plane. The object falls 4.9 meters during the first second. During the successive second, it falls 9.8 meters more than in the preceding second.
- a. How many meters does it fall during the tenth second ?
 - b. How many meters will the object fall in 15 seconds ?