1. Write the next two terms in the sequence 2, 5, 8, 11, . . .

   [A] 13, 16 [B] 20, 23 [C] 15, 18 [D] 14, 17

2. Write the next two terms in the sequence 6, 8, 10, 12, . . .

   [A] 13, 15 [B] 14, 16 [C] 18, 20 [D] 15, 17

3. Write the next two terms in the sequence 4, 9, 14, 19, . . .

   [A] 34, 39 [B] 25, 30 [C] 23, 28 [D] 24, 29

4. Write the next two terms in the sequence 3, 7, 11, 15, . . .

   [A] 18, 22 [B] 20, 24 [C] 27, 31 [D] 19, 23

5. Write the next two terms in the sequence 7, 12, 17, 22, . . .

   [A] 28, 33 [B] 37, 42 [C] 27, 32 [D] 26, 31

6. Write the next two terms in the sequence 5, 7, 9, 11, . . .

   [A] 17, 19 [B] 14, 16 [C] 13, 15 [D] 12, 14

7. Write the next two terms in the sequence 8, 12, 16, 20, . . .

   [A] 23, 27 [B] 24, 28 [C] 32, 36 [D] 25, 29

8. Write the next two terms in the sequence 9, 12, 15, 18, . . .

   [A] 22, 25 [B] 27, 30 [C] 21, 24 [D] 20, 23

9. Write the next two terms in the sequence 2, 4, 6, 8, . . .

   [A] 14, 16 [B] 10, 12 [C] 9, 11 [D] 11, 13

10. Write the next two terms in the sequence 6, 10, 14, 18, . . .

    [A] 21, 25 [B] 22, 26 [C] 30, 34 [D] 23, 27

Write the first five terms of the sequence defined by the given recursive or explicit formula.

11. $t_n = 47 - 9n$

12. $t_n = 47 - 3n$

Write the first five terms of the sequence defined by the given recursive or explicit formula.

13. $t_n = 56 - 8n$

14. $t_n = 38 - 7n$

15. $t_n = 34 - 4n$

16. $t_n = 46 - 6n$

17. $t_n = 48 - 5n$

18. $t_n = 50 - 3n$

19. $t_n = 41 - 7n$

20. $t_n = 35 - 8n$

21. $t_n = \frac{n(n-4)}{3}$

22. $t_n = \frac{n(n-3)}{2}$

23. $t_n = \frac{n(n-1)}{4}$

24. $t_n = \frac{n(n-2)}{3}$

25. $t_n = \frac{n(n+4)}{2}$

Write the first five terms of the sequence defined by the given recursive or explicit formula.

26. $t_n = \dfrac{n(n+3)}{4}$

27. $t_n = \dfrac{n(n-1)}{3}$

28. $t_n = \dfrac{n(n+2)}{2}$

29. $t_n = \dfrac{n(n+4)}{4}$

30. $t_n = \dfrac{n(n+3)}{3}$

Use the given formula to find the first four terms of the arithmetic sequence.

31. $t_n = 32 - 7n$

[A] 25, 32, 39, 46 [B] 25, –175, 1225, –8575 [C] 25, 18, 11, 4 [D] 18, 11, 4, –3

32. $t_n = 12 - 8n$

[A] 4, –4, –12, –20 [B] 4, 12, 20, 28

[C] –4, –12, –20, –28 [D] 4, –32, 256, –2048

33. $t_n = 10 - 9n$

[A] 1, 10, 19, 28 [B] –8, –17, –26, –35 [C] 1, –8, –17, –26 [D] 1, –9, 81, –729

34. $t_n = -21 + 2n$

[A] –17, –15, –13, –11 [B] –19, –17, –15, –13

[C] –19, –21, –23, –25 [D] –19, –38, –76, –152

Use the given formula to find the first four terms of the arithmetic sequence.

35. $t_n = -18 + 4n$

[A] –14, –18, –22, –26 [B] –14, –56, –224, –896

[C] –14, –10, –6, –2 [D] –10, –6, –2, 2

36. $t_n = -27 + 5n$

[A] –17, –12, –7, –2 [B] –22, –110, –550, –2750

[C] –22, –17, –12, –7 [D] –22, –27, –32, –37

37. $t_n = 16 - 6n$

[A] 10, –60, 360, –2160 [B] 4, –2, –8, –14 [C] 10, 16, 22, 28 [D] 10, 4, –2, –8

38. $t_n = -45 + 3n$

[A] –39, –36, –33, –30 [B] –42, –45, –48, –51

[C] –42, –39, –36, –33 [D] –42, –126, –378, –1134

39. $t_n = 11 - 2n$

[A] 9, 11, 13, 15 [B] 9, –18, 36, –72 [C] 7, 5, 3, 1 [D] 9, 7, 5, 3

40. $t_n = 32 - 5n$

[A] 22, 17, 12, 7 [B] 27, –135, 675, –3375 [C] 27, 22, 17, 12 [D] 27, 32, 37, 42

Use the given formula to find the first five terms of the arithmetic sequence.

41. $t_n = 40 - 9n$

42. $t_n = 40 - 5n$

43. $t_n = 40 - 7n$

44. $t_n = 30 - 4n$

Use the given formula to find the first five terms of the arithmetic sequence.

45. $t_n = 40 - 8n$

46. $t_n = 34 - 6n$

47. $t_n = 26 - 3n$

48. $t_n = 29 - 4n$

49. $t_n = 49 - 5n$

50. $t_n = 56 - 7n$

Write the first five terms of the geometric sequence using the given explicit formula.

51. $t_n = 6 \cdot \left(\frac{3}{5}\right)^n$

[A] $6, \frac{18}{5}, \frac{54}{25}, \frac{162}{125}, \frac{486}{625}$

[B] $\frac{18}{5}, \frac{54}{25}, \frac{162}{125}, \frac{486}{625}, \frac{1458}{3125}$

[C] $6, \frac{18}{5}, \frac{27}{4}, \frac{162}{11}, \frac{243}{7}$

[D] $6, \frac{9}{5}, \frac{6}{5}, 1, \frac{9}{10}$

52. $t_n = -3 \cdot \left(\frac{1}{2}\right)^n$

[A] $-3, -1, -\frac{1}{4}, 0, \frac{1}{8}$

[B] $-\frac{3}{2}, -\frac{3}{4}, -\frac{3}{8}, -\frac{3}{16}, -\frac{3}{32}$

[C] $-3, -\frac{3}{2}, -\frac{3}{4}, -\frac{3}{8}, -\frac{3}{16}$

[D] $-3, -\frac{3}{2}, -1, -\frac{3}{4}, -\frac{3}{5}$

Write the first five terms of the geometric sequence using the given explicit formula.

53. $t_n = 11 \cdot \left(\frac{1}{2}\right)^n$

[A] $11, \frac{11}{2}, \frac{11}{4}, \frac{11}{8}, \frac{11}{16}$

[B] $11, \frac{13}{4}, \frac{15}{8}, \frac{17}{12}, \frac{19}{16}$

[C] $11, \frac{11}{2}, \frac{22}{3}, 11, \frac{88}{5}$

[D] $\frac{11}{2}, \frac{11}{4}, \frac{11}{8}, \frac{11}{16}, \frac{11}{32}$

54. $t_n = -2 \cdot \left(\frac{1}{3}\right)^n$

[A] $-\frac{2}{3}, -\frac{2}{9}, -\frac{2}{27}, -\frac{2}{81}, -\frac{2}{243}$

[B] $-2, -\frac{2}{3}, -\frac{1}{2}, -\frac{2}{5}, -\frac{1}{3}$

[C] $-2, -\frac{2}{3}, -\frac{2}{9}, -\frac{2}{27}, -\frac{2}{81}$

[D] $-2, -\frac{1}{3}, 0, \frac{1}{9}, \frac{1}{6}$

55. $t_n = -5 \cdot \left(\frac{3}{5}\right)^n$

[A] $-5, -3, -\frac{45}{8}, -\frac{135}{11}, -\frac{405}{14}$

[B] $-5, -3, -\frac{9}{5}, -\frac{27}{25}, -\frac{81}{125}$

[C] $-3, -\frac{9}{5}, -\frac{27}{25}, -\frac{81}{125}, -\frac{243}{625}$

[D] $-5, -\frac{2}{5}, \frac{1}{10}, \frac{4}{15}, \frac{7}{20}$

56. $t_n = -10 \cdot \left(\frac{1}{2}\right)^n$

[A] $-10, -5, -\frac{5}{2}, -\frac{5}{4}, -\frac{5}{8}$

[B] $-10, -\frac{9}{2}, -2, -\frac{7}{6}, -\frac{3}{4}$

[C] $-5, -\frac{5}{2}, -\frac{5}{4}, -\frac{5}{8}, -\frac{5}{16}$

[D] $-10, -5, -\frac{10}{3}, -\frac{5}{2}, -2$

Write the first five terms of the geometric sequence using the given explicit formula.

57. $t_n = 9 \cdot \left(\frac{1}{4}\right)^n$

[A] $9, \frac{9}{4}, \frac{9}{16}, \frac{9}{64}, \frac{9}{256}$

[B] $9, \frac{5}{2}, \frac{11}{8}, 1, \frac{13}{16}$

[C] $9, \frac{9}{4}, \frac{9}{5}, \frac{3}{2}, \frac{9}{7}$

[D] $\frac{9}{4}, \frac{9}{16}, \frac{9}{64}, \frac{9}{256}, \frac{9}{1024}$

58. $t_n = 8 \cdot \left(\frac{2}{3}\right)^n$

[A] $\frac{16}{3}, \frac{32}{9}, \frac{64}{27}, \frac{128}{81}, \frac{256}{243}$

[B] $8, \frac{16}{3}, \frac{32}{9}, \frac{64}{27}, \frac{128}{81}$

[C] $8, \frac{16}{3}, \frac{32}{5}, \frac{64}{7}, \frac{128}{9}$

[D] $8, \frac{10}{3}, 2, \frac{14}{9}, \frac{4}{3}$

59. $t_n = 4 \cdot \left(\frac{1}{5}\right)^n$

[A] $4, \frac{4}{5}, \frac{2}{3}, \frac{4}{7}, \frac{1}{2}$

[B] $4, 1, \frac{3}{5}, \frac{7}{15}, \frac{2}{5}$

[C] $4, \frac{4}{5}, \frac{4}{25}, \frac{4}{125}, \frac{4}{625}$

[D] $\frac{4}{5}, \frac{4}{25}, \frac{4}{125}, \frac{4}{625}, \frac{4}{3125}$

60. $t_n = 7 \cdot \left(\frac{1}{2}\right)^n$

[A] $7, 4, \frac{9}{4}, \frac{5}{3}, \frac{11}{8}$

[B] $\frac{7}{2}, \frac{7}{4}, \frac{7}{8}, \frac{7}{16}, \frac{7}{32}$

[C] $7, \frac{7}{2}, \frac{7}{3}, \frac{7}{4}, \frac{7}{5}$

[D] $7, \frac{7}{2}, \frac{7}{4}, \frac{7}{8}, \frac{7}{16}$