1. A 50-row theater has 20 seats in the front row. The second row has 21 seats. If each row has one more than the row in front of it, how many seats are there in the theater?

   [A] 4500 [B] 2225 [C] 2250 [D] 4450

2. A 60-row theater has 40 seats in the front row. The second row has 41 seats. If each row has one more than the row in front of it, how many seats are there in the theater?

   [A] 8400 [B] 4170 [C] 4200 [D] 8340

3. A 30-row theater has 50 seats in the front row. The second row has 51 seats. If each row has one more than the row in front of it, how many seats are there in the theater?

   [A] 3900 [B] 3870 [C] 1935 [D] 1950

4. A 40-row theater has 10 seats in the front row. The second row has 11 seats. If each row has one more than the row in front of it, how many seats are there in the theater?

   [A] 1180 [B] 2360 [C] 1200 [D] 2400

5. A 50-row theater has 30 seats in the front row. The second row has 31 seats. If each row has one more than the row in front of it, how many seats are there in the theater?

   [A] 2725 [B] 5500 [C] 5450 [D] 2750

Evaluate the sum.

6. $\sum_{k=1}^{27}(8k+4)$ [A] 3024 [B] 3132 [C] 239 [D] 3240

7. $\sum_{k=1}^{47}(-5k+9)$ [A] –5640 [B] –5217 [C] –174 [D] –5334.5

8. $\sum_{k=1}^{34}(-6k-1)$ [A] –165 [B] –3706 [C] –3570 [D] –3604

9. $\sum_{k=1}^{36}(-2k+3)$ [A] –1260 [B] –1224 [C] –31 [D] –1332

10. $\sum_{k=1}^{39}(7k+3)$ [A] 5460 [B] 5577 [C] 308 [D] 5713.5

Evaluate the sum.

11. $\sum_{k=1}^{49}(-7k+1)$ [A] –8575 [B] –286 [C] –8697.5 [D] –8526

12. $\sum_{k=1}^{20}(4k+8)$ [A] 840 [B] 104 [C] 1040 [D] 1000

13. $\sum_{k=1}^{42}(-2k+9)$ [A] –1428 [B] –1470 [C] –1806 [D] –31

14. $\sum_{k=1}^{12}(-5k-6)$ [A] –390 [B] –492 [C] –462 [D] –49

15. $\sum_{k=1}^{23}(4k+1)$ [A] 1104 [B] 1173 [C] 112 [D] 1127

16. $\sum_{k=1}^{19}(-3k-1)$

17. $\sum_{k=1}^{23}(-9k+6)$

18. $\sum_{k=1}^{47}(-7k-4)$

19. $\sum_{k=1}^{33}(-8k+5)$

20. $\sum_{k=1}^{30}(-2k-6)$

21. $\sum_{k=1}^{25}(-8k-9)$

Evaluate the sum.

22. $\sum_{k=1}^{29}(k-4)$

23. $\sum_{k=1}^{36}(-2k+7)$

24. $\sum_{k=1}^{27}(-5k-3)$

25. $\sum_{k=1}^{12}(-8k+2)$

26. Find the sum of the first 12 terms of the sequence $5, 13, 21, 29, \ldots$

27. Find the sum of the first 13 terms of the sequence $7, 13, 19, 25, \ldots$

28. Find the sum of the first 11 terms of the sequence $9, 13, 17, 21, \ldots$

29. Find the sum of the first 15 terms of the sequence $3, 11, 19, 27, \ldots$

30. Find the sum of the first 14 terms of the sequence $11, 17, 23, 29, \ldots$

31. Find the sum of the first 12 terms of the sequence $5, 9, 13, 17, \ldots$

32. Find the sum of the first 13 terms of the sequence $7, 15, 23, 31, \ldots$

33. Find the sum of the first 11 terms of the sequence $9, 15, 21, 27, \ldots$

34. Find the sum of the first 15 terms of the sequence $3, 7, 11, 15, \ldots$

35. Find the sum of the first 14 terms of the sequence $11,\ 19,\ 27,\ 35,\ \ldots$

36. Find the sum of the first 5 terms of the geometric series $-3-\frac{3}{5}-\frac{3}{25}-\frac{3}{125}-\ldots$

[A] –4.92 [B] –9 [C] –3.75 [D] –3.77

37. Find the sum of the first 6 terms of the geometric series $-8-2-\frac{1}{2}-\frac{1}{8}-\ldots$

[A] –10.66 [B] –17.4 [C] –38 [D] –10.9

38. Find the sum of the first 4 terms of the geometric series $6+\frac{18}{5}+\frac{54}{25}+\frac{162}{125}+\ldots$

[A] 17.16 [B] 7.73 [C] 46.5 [D] 13.06

39. Find the sum of the first 7 terms of the geometric series $7+\frac{14}{3}+\frac{28}{9}+\frac{56}{27}+\ldots$

[A] 109.71 [B] 77.78 [C] 35.72 [D] 19.77

40. Find the sum of the first 7 terms of the geometric series $2+\frac{3}{2}+\frac{9}{8}+\frac{27}{32}+\ldots$

[A] 15.78 [B] 6.93 [C] 11.72 [D] 260.14

41. Find the sum of the first 5 terms of the geometric series $-4-\frac{4}{3}-\frac{4}{9}-\frac{4}{27}-\ldots$

[A] –5.98 [B] –17.33 [C] –8.85 [D] –5.71

42. Find the sum of the first 4 terms of the geometric series $-9-\frac{9}{2}-\frac{9}{4}-\frac{9}{8}-\ldots$

[A] –22.14 [B] –16.88 [C] –13.88 [D] –36

43. Find the sum of the first 6 terms of the geometric series $5+2+\frac{4}{5}+\frac{8}{25}+\ldots$

[A] 15.6 [B] 8.3 [C] 16 [D] 30.73

44. Find the sum of the first 5 terms of the geometric series $-10-8-\frac{32}{5}-\frac{128}{25}-\ldots$

[A] –41.52 [B] –606.27 [C] –15.66 [D] –33.62

45. Find the sum of the first 4 terms of the geometric series $-7-\frac{7}{5}-\frac{7}{25}-\frac{7}{125}-\ldots$

[A] –8.52 [B] –8.74 [C] –10.84 [D] –15.4

46. Find the sum of the first 6 terms of the geometric series $6+\frac{9}{2}+\frac{27}{8}+\frac{81}{32}+\frac{243}{128}+\ldots$

Give the answers to the nearest hundredth, if necessary.

47. Find the sum of the first 6 terms of the geometric series $3+\frac{12}{5}+\frac{48}{25}+\frac{192}{125}+\frac{768}{625}+\ldots$

Give the answers to the nearest hundredth, if necessary.

48. Find the sum of the first 7 terms of the geometric series $3+\frac{12}{5}+\frac{48}{25}+\frac{192}{125}+\frac{768}{625}+\ldots$

Give the answers to the nearest hundredth, if necessary.

49. Find the sum of the first 7 terms of the geometric series $5+\frac{5}{2}+\frac{5}{4}+\frac{5}{8}+\frac{5}{16}+\ldots$

Give the answers to the nearest hundredth, if necessary.

50. Find the sum of the first 6 terms of the geometric series $5+2+\frac{4}{5}+\frac{8}{25}+\frac{16}{125}+\ldots$

Give the answers to the nearest hundredth, if necessary.

51. Find the sum of the first 6 terms of the geometric series $6+3+\frac{3}{2}+\frac{3}{4}+\frac{3}{8}+\ldots$

Give the answers to the nearest hundredth, if necessary.

52. Find the sum of the first 6 terms of the geometric series $4+\frac{16}{5}+\frac{64}{25}+\frac{256}{125}+\frac{1024}{625}+\ldots$

Give the answers to the nearest hundredth, if necessary.

53. Find the sum of the first 7 terms of the geometric series $6+8+\frac{32}{3}+\frac{128}{9}+\frac{512}{27}+\ldots$
Give the answers to the nearest hundredth, if necessary.

54. Find the sum of the first 7 terms of the geometric series $4+\frac{8}{3}+\frac{16}{9}+\frac{32}{27}+\frac{64}{81}+\ldots$
Give the answers to the nearest hundredth, if necessary.

55. Find the sum of the first 6 terms of the geometric series $4+3+\frac{9}{4}+\frac{27}{16}+\frac{81}{64}+\ldots$
Give the answers to the nearest hundredth, if necessary.