

Finite Geometric Series

Evaluate the related series of each sequence.

1) 2, 12, 72, 432

518

2) -1, 5, -25, 125

104

3) -2, 6, -18, 54, -162

-122

4) -2, -12, -72, -432, -2592

-3110

15) $1 - 4 + 16 - 64\dots, n = 9$

52429

16) $-2 - 6 - 18 - 54\dots, n = 9$

-19682

17) $1 - 5 + 25 - 125\dots, n = 7$

13021

18) $-3 - 6 - 12 - 24\dots, n = 9$

-1533

19) $a_1 = 4, a_n = 1024, r = -2$

684

20) $a_1 = 4, a_n = 8748, r = 3$

13120

Determine the number of terms n in each geometric series.

21) $a_1 = -2, r = 5, S_n = -62$

3

22) $a_1 = 3, r = -3, S_n = -60$

4