

### Summations

#### Unit 7: Representations of Exponential Relations

Evaluate the related series of each sequence.

1. 3, 9, 27, 81	2. -4, 24, -144, 864
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Evaluate each geometric series described.

3. $-1 - 2 - 4 - 8 \dots, n = 7$	4. $-2 + 8 - 32 + 128 \dots, n = 7$
5. $\sum_{i=1}^9 -4^{i-1}$	6. $\sum_{n=1}^7 (5)^{n-1}$
7. $\sum_{k=1}^7 -4(-2)^{k-1}$	8. $\sum_{m=1}^7 -6^{m-1}$
9. $a_1 = -3, a_n = 234375, r = -5$	10. $a_1 = 4, a_n = 2048, r = 2$

Evaluate each geometric series described.

11. $a_1 = -3, a_n = -234375, r = 5$	12. $a_1 = -3, a_n = -59049, r = 3$
13. $a_1 = 4, a_7 = 62500, r = 5$	14. $a_1 = 1, a_7 = 4096, r = 4$
15. $a_1 = 3, a_{10} = 59049, r = 3$	16. $a_1 = -4, a_8 = -512, r = 2$
17. $a_1 = -2, r = -4, n = 8$	18. $a_1 = -3, r = 3, n = 10$
19. $a_1 = -4, r = -6, n = 7$	20. $a_1 = 2, r = 3, n = 8$