

Practice 14.2 ANSWER KEY1. Geometric, $r = -6$ 2. Arithmetic, $d = -20$ 3. Arithmetic, $d = \frac{1}{2}$

4. Neither

5. Arithmetic, $d = 4$ 6. Geometric, $r = 5$ 7. Arithmetic, $d = \frac{5}{3}$ 8. Arithmetic, $d = 6$ 9. Geometric, $r = -6$

10. Neither

11. $a_n = 10 + 6(n-1); a_{25} = 154$ 12. $a_n = -31 - 2(n-1); a_{35} = -99$

13. Not arithmetic

14. $a_n = 1(4)^{n-1}; a_9 = 65,536$

15. Not geometric

16. $a_n = 1(-2)^{n-1}; a_{10} = -512$ 17. a. $S_{14} = 89,478,485$ b. $n = 5$ 18. a. $S_{40} = -4240$ b. $n = 7$ 19. a. $S_{18} = -677,985,854$ b. $n = 7$ 20. a. $S_{24} = 3912$ b. $n = 18$ 21. a. $S_{10} = 435,848,050$ b. $n = 4$ 22. a. $S_{20} = 1010$ b. $n = 12$

23. 39

24. 32

25. $t^3 + t^4 + t^5$ 26. $\sum_{k=4}^8 k^2$ 27. $\sum_{k=1}^5 2^k$ 28. $\sum_{k=1}^4 k + 500$ **APPLICATION**

1. Answers will vary

2. 630

3. a. $a_n = 64\left(\frac{1}{2}\right)^{n-1}$, for n values

from 1 to 7

b. 127 games

4. $a_n = 1(3)^{n-1}; a_{10} = 19,683$