6.6 Geometric Sequences Book Problem Answers without WORK

1. The first sequence is an arithmetic sequence with a common difference of 2. The second sequence is a geometric sequence with a common ratio of 2.

3. 3

5. -8

7. $\frac{3}{4}$

9. arithmetic; There is a common difference of 8.

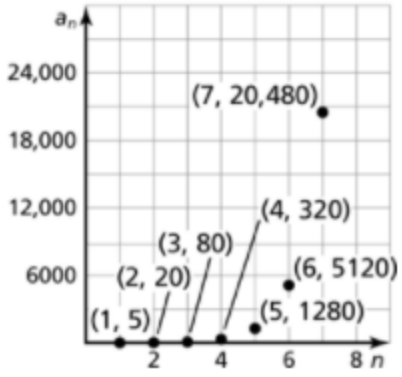
11. neither; There is no common difference or common ratio.

13. geometric; There is a common ratio of $\frac{1}{8}$.

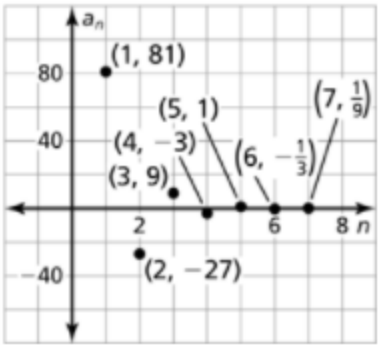
15. geometric; There is a common ratio of 5.

17. neither; There is no common difference or common ratio.

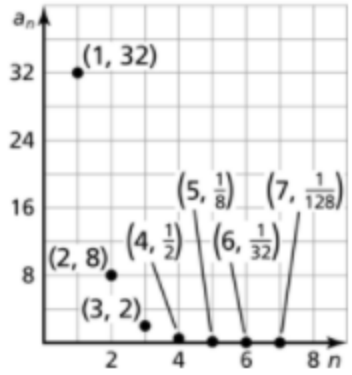
19. 1280; 5120; 20,480



21. $1, -\frac{1}{3}, \frac{1}{9}$



23. $\frac{1}{8}, \frac{1}{32}, \frac{1}{128}$



25. $a_n = 2(4)^{n-1}$; 2048

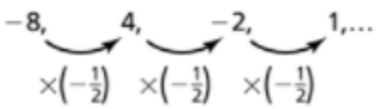
27. $a_n = -\frac{1}{8}(2)^{n-1}$; -4

29. $a_n = 7640(0.1)^{n-1}$; 0.0764

31. $a_n = 0.5(-6)^{n-1}$; -3888

33. 16 teams; 8 teams; 4 teams

35. The common factor is $-\frac{1}{2}$, not -2;



The next three terms are $-\frac{1}{2}$, $\frac{1}{4}$, and $-\frac{1}{8}$.

37. **a.** $a_n = 625\left(\frac{4}{5}\right)^{n-1}$

b. 5 swings

39. **a.** $a_n = 9^{n-1}$

b. a large square containing 387,420,489 small squares