**Find the first four terms and the eighth term of the sequence.**

1. {12-3n} 2. { 3. {9}

4. {(-1)n-1} 5. {1+(-1)n+1} 6. {}

7. an is the number of decimal places in (0.1)n.

**Graph the sequence.**

8. {} 9. {} 10. {(-1)n+1n2}

  

**Find the first five terms of the recursively defined infinite sequence.**

11. a1 = 2, ak+1 = 3ak – 5 12. a1 = -3, ak+1 = ak2 13. a1 = 5, ak+1=kak

14. a1 = 128, ak+1= ak 15. a1 = 3, ak+1 = 1/ak 16. a1 = 2, ak+1 = (ak)k

17. Find the first four terms of the sequence of partial sums for the given sequence {3 + }.

**Find the sum.**

18. 19. 20.

21. 22. 23. 24.

25. The number of bacteria in a certain culture is initially 500, and the culture doubles in size every day.

(a) Find the number of bacteria present after one day, two days, and three days.

(b) Find a formula for the number of bacteria present after n days.

26. The Fibonacci sequence is defined recursively by a1 = 1, a2 = 1, ak+1 = ak + ak-1 for k ≥ 2.

(a) Find the first ten terms of the sequence.