

Given the explicit formula for each arithmetic sequence, write a sequence with 4 terms.

1. $f(x) = -3 + x(5)$

2. $f(x) = -10 + x(5)$

Given the explicit formula for each geometric sequence, write a sequence with 4 terms.

3. $f(x) = 243(1/3)^x$

4. $f(x) = -8(1.5)^x$

Given the recursive formula for each arithmetic sequence, write a sequence with 4 terms.

5. $f(0) = -2$
 $f(x+1) = f(x) + 3$

6. $f(0) = -9$
 $f(x+1) = f(x) - 1.5$

Given the recursive formula for each geometric sequence, write a sequence with 4 terms.

7. $f(0) = -32$
 $f(x+1) = f(x) \cdot (1/4)$

8. $f(0) = 5$
 $f(x+1) = f(x) \cdot (-3)$

Given the following formulas,

a) determine whether it is *arithmetic* or *geometric* and if it *recursive* or *explicit*.

b) the first four terms in the sequence.

9. $f(x) = 5 + x(5)$

10. $f(0) = -2$
 $f(x+1) = f(x) + \frac{1}{2}$

$$11. \begin{aligned} f(0) &= \frac{3}{2} \\ f(x+1) &= f(x) - \frac{1}{3} \end{aligned}$$

$$12. \begin{aligned} f(0) &= -2 \\ f(x+1) &= f(x) + 6 \end{aligned}$$

$$13. f(x) = 100(2)^x$$

$$14. f(x) = -3 + x(3)$$

$$15. \begin{aligned} f(0) &= 3 \\ f(x+1) &= f(x) - (2) \end{aligned}$$

$$16. f(x) = \frac{1}{8} (1/2)^x$$

Given the following sequence,

- a) determine if it is arithmetic or geometric
- b) write the recursive and explicit formulas

$$17. 7, 17, 27, 37, \dots$$

$$18. 4, 16, 64, 253, \dots$$

$$19. -3, 6, -12, 24, \dots$$

$$20. 23, 21, 19, 17, \dots$$