SECTION 5

18. f(1) f(2) f(3) f(4) f(5) f(6) ...
3, 6, 12, 24, 48, 96, ...
(*2 *2 *2)

a. Is the sequence Arithmetic or Geometric? How do you know?

Multiplies by 2 every time.

b. What are the next three terms in the sequence?

f(7) f(8) f(9)

192 384 768

c. Write a recursive definition of the function.

$f(n) = f(n-1) * 2$, $f(1) = 3$

d. Write an explicit definition of the function

$f(n) = 3 * (2^{n-1})$ OR $f(n) = \frac{3}{2} * (2^n)$

19. g(1) g(2) g(3) g(4) g(5) g(6) ...
3, 10, 17, 24, 31, 38, ...
(+7 +7)

e. Is the sequence Arithmetic or Geometric? How do you know?

The sequence has a constant rate of change by adding 7 every time.

f. What are the next three terms in the sequence?

g(7) g(8) g(9)

45 52 59

g. Write a recursive definition of the function.

$g(n) = g(n-1) + 7$, $g(1) = 3$

h. Write an explicit definition of the function

$g(n) = 7(n-1) + 3$ OR $g(n) = 7(n) - 4$