Name_____ Date_____ Period_____

1 What is the $5th$ term of the geometric sequence below?

$$f(1) = 45,\ f(n) = \frac{1}{3}f(n-1)$$

2 Write the first 6 terms of the sequence defined by the recursive rule below.

$$f(1) = 17,\ f(n) = f(n-1) - 3$$

3 What are the $3rd$, $5th$ & $7th$ terms of the sequence?

$$f(2) = 21,\ f(n) = f(n-1)\frac{1}{2}$$

4 Write the first 3 terms of the sequence defined by the recursive rule $f(1) = \frac{1}{2}, f(n) = f(n-1) + \frac{1}{2}$.

n	$f(n)$
1	
2	
3	

5 What is the $15th$ term of the sequence below?

$$f(3) = -8, f(n) = f(n-1) + .5$$

6 Complete the table for the sequence below.

$$f(1) = \frac{2}{3}, f(n) = f(n-1)(-3)$$

n	1	2	3	4	5
$f(n)$					

7 What is the $9th$ term of the sequence below?

$$f(1) = 0,\ f(n) = f(n-1) - 8$$

8 What are the $4th$, $8th$ & $12th$ terms of the sequence?

$$f(1) = -4, f(n) = f(n-1) + 5$$

9 Write the first 7 terms of the sequence defined by the recursive rule below.

$$f(1) = -2,\ f(n) = -2f(n-1)$$

10 Write the first 4 terms of the sequence defined by the recursive rule below.

$$f(1) = -\frac{1}{4},\ f(n) = f(n-1)2$$

11 What is the $11th$ term of the sequence below?

$$f(5) = \frac{3}{4}, f(n) = -4f(n-1)$$

12 What is the $5th$ term of the sequence below?

$$f(1) = -4,\ f(n) = f(n-1) + 3$$

13 Complete the table for the sequence below.

$$f(2) = -6, f(n) = -\frac{1}{3}f(n-1)$$

n	2	3	4	5	6
$f(n)$					

14 What are the $4th$, $5th$ & $6th$ terms of the sequence?

$$f(3) = 3,\ f(n) = f(n-1) - 1$$

15 Write the first 6 terms of the sequence.

$$f(1) = 2, f(n) = -1.5f(n-1)$$

16 What is the $12th$ term of the sequence below?

$$f(1) = 7,\ f(n) = f(n-1) - 3$$

17 Write the first 3 terms of the sequence defined by the recursive rule $f(1) = 2, f(n) = f(n-1)5$.

n	$f(n)$
1	
2	
3	

18 What is the $8th$ term of the sequence below?

$$f(1) = -33, f(n) = f(n-1) + 5$$

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ANSWER KEY

1 $\frac{5}{9}$	2 $17, 14, 11, 8, 5, 2$	3 $\frac{21}{2}, \frac{21}{8}, \frac{21}{32}$
4 $\frac{1}{2}, 1, \frac{3}{2}$	5 -2	6 $\frac{2}{3}, -2, 6, -18, 54$
7 -64	8 $11, 31, 51$	9 $-2, 4, -8, -16, -32, 64, -128$
10 $-\frac{1}{4}, -\frac{1}{2}, -1, -2$	11 3072	12 8
13 $-6, 2, -\frac{2}{3}, \frac{2}{9}, -\frac{2}{27}$	14 $2, 1, 0$	15 $2, -3, 4.5, -6.75, 10.125, -15.1875$
16 -26	17 $2, 10, 50$	18 2