

1.4 Recursive & Explicit Formula

ARITHMETIC Recursive and Explicit Worksheet

Name _____

Given the following formulas, find the first 4 terms.

1. $t_1 = 0$
 $t_n = t_{n-1} + 6$

2. $t_1 = -4$
 $t_n = t_{n-1} + 2$

3. $t_1 = 8$
 $t_n = t_{n-1} - 4$

4. $t_n = 3n - 1$

5. $t_n = 4n + 3$

6. $t_n = -5n + 2$

7. Write an explicit and recursive formula for the following sequences.

a. -4, -6, -8, -10...

Explicit: _____

Recursive: _____

b. 84, 71, 58, 45...

Explicit: _____

Recursive: _____

c. 19, 13, 7, 1...

Explicit: _____

Recursive: _____

d. 9, 17, 25, 33...

Explicit: _____

Recursive: _____

e. -3, -1, 1, 3...

Explicit: _____

Recursive: _____

f. 110, 88, 66, 44...

Explicit: _____

Recursive: _____

Given the recursive formula, write the explicit formula for the sequence.

8. $t_1 = 0$
 $t_n = t_{n-1} + 6$

9. $t_1 = -4$
 $t_n = t_{n-1} + 2$

10. $t_1 = 8$
 $t_n = t_{n-1} - 4$

Given the explicit formula, write the recursive formula for the sequence.

11. $t_n = 3n - 1$

12. $t_n = 4n + 3$

13. $t_n = -5n + 2$