

1. List the first 3 values generated by the recursive routine below. Then write the routine as a NOW-NEXT equation.

5 ENTER
ANS*2 + 1, ENTER

First 4 values:
5, 11, 23, 47

Now-Next Equation
START @ 5
NEXT = NOW * 2 + 1

2. Write a NOW-NEXT equation for the sequence: 1, 3, 9, 27

Now-Next Equation
START @ 1
NEXT = NOW * 3

3. Fill in the table below for the Input-Output rule $Output = -3 * (input) + 2$

In	Out
0	2
5	-13
9	-25
13	-37

4. Write the Input-Output rule and fill in empty boxes.

Input	<u>-1</u>	1	<u>2</u>	<u>3</u>
Output	<u>2</u>	-2	<u>-4</u>	<u>-6</u>

OUTPUT = INPUT * -2
OR
 $Y = -2X$

5. Given the sequence below, answer a and b.
2, 4, 6, 8

A. What is the value of the 10th term?

20

B. Which term has a value of 64?

Wh **32ND**

6. Fill in the missing domain and range values for the equation:

~~$y = 2x - 4$~~

Domain	-4	0	-4.5	3
x (INPUT)				
Range	4	-4	5	-10
y (OUTPUT)				

$$\begin{aligned}
 5 &= -2x - 4 & 5 &= -2x - 4 \\
 9 &= -2x & +4 & +4 \\
 \hline
 9 &= -2x & -2 & -2
 \end{aligned}$$

7. Each square in this pattern has side length 1 unit. Imagine that the pattern continues.



Figure 1

Figure 2

Figure 3

Figure 4

a. Find the perimeter of Figure 9. **58**

b. Which figure would have a perimeter of 76 units? **FIGURE 12**

c. Write a NOW-NEXT equation to find the perimeter of any figure in the pattern.

START @ 10 ; NEXT = NOW + 6