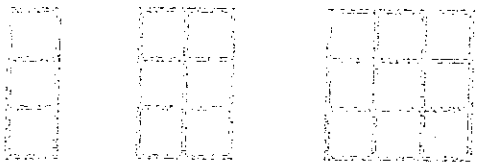
 Name 4th WIN

Extend Patterns

Follow the rule. Extend the pattern.

1. Rule: add 3 squares



_____ _____

2. Rule: Subtract 2.

21, 19, 17, _____, _____, _____

3. Rule: Multiply by 2.

2, 4, 8, _____, _____, _____

4. Rule: Add 7.

30, 37, 44 _____, _____, _____

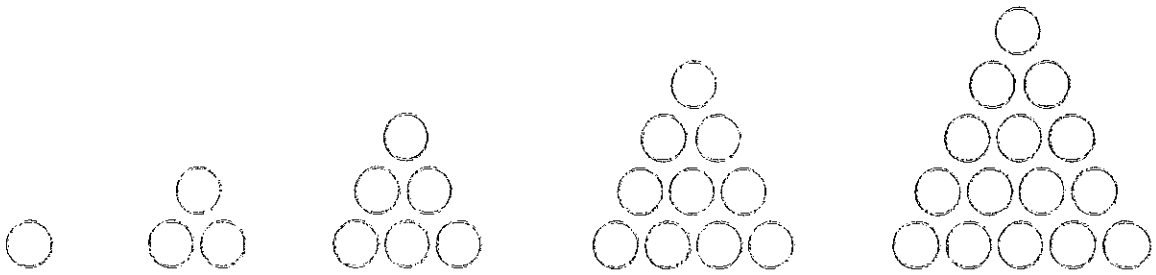
☆ Tell how the rule describes the pattern.

 Name _____

Describe Patterns

Describe the pattern.

1



The pattern is _____.

2 1, 3, 9, 27, 81

The pattern is _____.

3 99, 88, 77, 66

The pattern is _____.

4 2, 5, 11, 23

The pattern is _____.

☆ Tell what you did to find the pattern.

15 Which two pairs of numbers correctly complete this table? Select the two correct answers.

Number	Number × 10
850	8,500
3,501	35,010
19	190

- ☐ | 28 | 208 |
- ☐ | 365 | 36,500 |
- ☐ | 1,987 | 19,870 |
- ☐ | 6 | 600 |
- ☐ | 495 | 4,950 |
- ☐ | 3,700 | 870 |

Test A : Name: _____

Directions: Read each problem carefully and select the best answer.

45. The number of legs in the kennel depends on the number of dogs. What are the missing values in this table?

A. 7, 9
B. 12, 20
C. 12, 24
D. 6, 10

Input: Dogs	Output: Legs
1	4
2	8
3	
4	16
5	

Think of a rule. Test it on each pair of numbers shown. Does it work?

46. Will the next three values in the table be odd or even?

A. even, even, even
B. odd, even, odd
C. even, odd, even
D. odd, odd, odd

Input: Original Price	Output: Sale Price
$10	$5
$15	
$20	
$25	
$30	$25

Check the first pair of numbers to see how the second number changed from the first number in the pair. Check if the other pairs changed in the same way. Then continue the pattern to see what the next numbers will be.

47. Marcco is two years younger than his sister, Tessa. When Marcco is 23, Tessa will be 25. Complete the table with the missing ages. Marcco's age = *m* and Tessa's age = *t*.

A. 22, 24
B. 26, 28
C. 23, 25
D. 25, 27

$m = t - 2$	
Input: t	Output: m
24	
25	23
26	
27	25

$t - 2$ means that you are taking years off of Tessa's age to find Marcco's age.

48. There are 3 pencils on each desk and 5 pencils in the teacher's closet. The total number of pencils (p) in the classroom depends on the number of desks (d). What are the missing values in this table?

A. 9, 12
B. 16, 40
C. 6, 15
D. 11, 20

$p = (3)d + 5$	
Input: d	Output: p
1	8
2	
3	14
4	17
5	

To find how many pencils are on *two* desks, replace d with 2, then solve: $p = (3)\ 2 + 5$.

Test B Name: _____

Directions: Read each problem carefully and select the best answer.

45. Are the missing values in this table odd or even?

A. even, odd
B. odd, odd
C. odd, even
D. even, even

Input: Weeks	Output: Days
2	
3	
4	28
5	35

First, figure out the relationship between the number of weeks and the number of days. Then, continue that pattern to find the missing values.

46. What are the missing values in this table?

A. 48, 72
B. 24, 96
C. 48, 108
D. 24, 72

Input: Teams	Output: Players
1	12
2	
3	36
5	60
8	

47. Peter has 3 baseball hats. He decides that he wants to collect baseball team hats (b) and football team hats (f). From now on, he will buy a baseball team hat and a football team hat from each city that he visits. This table shows the number of baseball team hats and football team hats that Peter will have at different times. What are the missing values in this table?

A. 11, 14
B. 17, 20
C. 14, 17
D. 3, 3

Input: f	Output: b
14	
15	18
16	19
17	
18	21

First, figure out the relationship between the given number of baseball team hats and the number of football team hats.

48. A purple ribbon is 6 inches less than 3 times as long as the yellow ribbon. The length of the purple ribbon (p) depends on the length of the yellow ribbon (y). What are the missing values in this table?

A. 30, 39
B. 36, 45
C. 24, 33
D. 24, 39

Input: y	*Output: p*
9	21
10	
11	27
12	30
13	

Test C Name: _____

Directions: Read each problem carefully and select the best answer.

45. Some starfish have 9 arms. The table below shows how many arms are found on a given number of starfish. Will the next three values in the table be odd or even?

A. odd, odd, odd
B. odd, even, odd
C. even, odd, even
D. even, even, even

Input: Starfish	Output: Arms
1	9
2	18
3	
4	
5	

46. What are the missing values in this table?

A. $17.00, $59.50
B. $17.00, $68.00
C. $34.00, $68.00
D. $32.00, $64.00

Input: Hours Worked	Output: Money Earned
1	$8.50
4	
3	$25.50
6	$51.00
3	

47. Given the function below, what are the missing values in the table?

A. 17, 20
B. 11, 14
C. 60, 75
D. 7, 10

$m = n-5$	
Input: n	Output: m
11	6
12	
13	8
14	9
15	

48. The number of blue markers that David has is 12 less than 2 times the number of red markers Debbie has. The number of markers David has (b) depends on the number of markers Debbie has (r). What are the missing values in this table?

A. 48, 58
B. 72, 52
C. 18, 23
D. 60, 70

$b = 2r-12$	
Input: r	Output: b
25	38
27	42
30	
33	54
35	