Name: _____

Writing Algebraic Expressions – PRACTICE
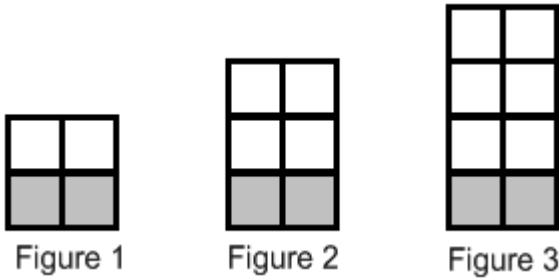
EXAMPLE

Figure 1   Figure 2   Figure 3

Figure	n =	We Need…	2n	+ 2
1	1	4 squares	2 squares	4 sq.
2	2	6 squares	4 squares	6 sq.
3	3	8 squares	6 squares	8 sq.
4	4	10 squares	8 squares	10 sq.

Explanation A
The white squares are growing by 2 each time. Therefore, I will multiply n by 2. The grey squares remain constant and there are 2 of them. Therefore, I will add 2.   **2n + 2**

Explanation B
Since the pattern is growing by 2 (4, 6, 8), I will start my algebraic expression by multiplying n by 2. Then I will add 2 because I need two additional squares in each figure.   **2n + 2**
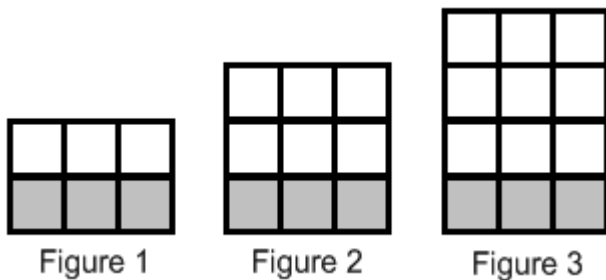
PRACTICE #1

Figure 1   Figure 2   Figure 3

Figure	n =	We Need…		

Algebraic Expression:_____

PRACTICE #2

Figure 1   Figure 2   Figure 3
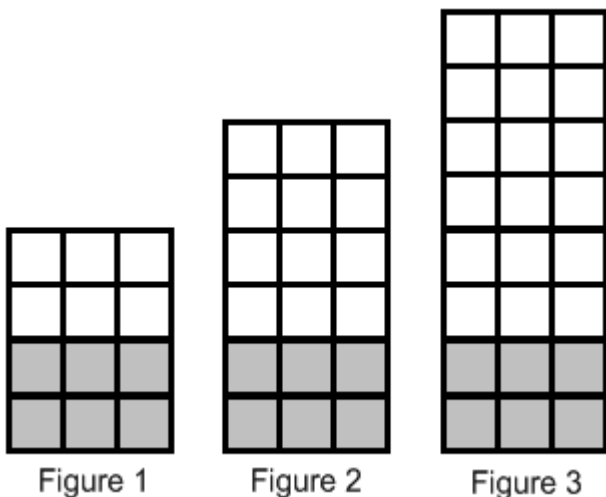
Figure	n =	We Need…		

Algebraic Expression:_____

EXAMPLE

4, 7, 10, 13,...   Each term is growing by 3 each time

Term Number	n =	We need…	**3n**	**+ 1**
1	1	4	3	4
2	2	7	6	7
3	3	10	9	10
4	4	13	12	13

Since each term is growing by 3 each time, n will be multiplied by 3. However, the result of 3n is 3, 6, and 9, and the numbers in each term are 4, 7, and 10. Therefore, 1 needs to be added to each term as well. **ALGEBRAIC EXPRESSION is 3n + 1**

PRACTICE #1

5, 7, 9, 11,...

Term Number	n =	We need…		

ALGEBRAIC EXPRESSION _____

PRACTICE #2

10, 16, 22, 28...

Term Number	n =	We need…		

ALGEBRAIC EXPRESSION _____

PRACTICE #3

5, 15, 25, 35,...

Term Number	n =	We need…		

ALGEBRAIC EXPRESSION _____