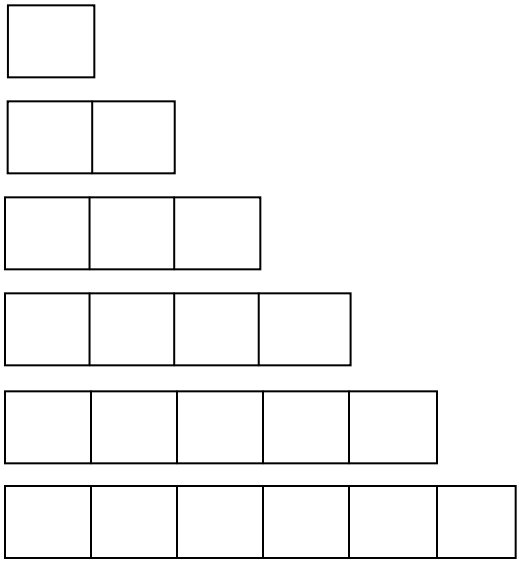
Using Algebraic Expressions Formulas and Rule

1. **Complete the table.**



	No. of Squares	No. of Matches
	1	4
	_____	7
	3	_____
	_____	_____
	_____	_____
	6	19

For the given pattern the expression for nth term will be _____.

The 50th square contains _____ line segments.

The total number of line segments for 12th square will be_____.

2. **If the number of line segments is given by the expression 3n – 1, then find the number of line segments for**

A. n = 11

B. n = 31

C. n = 45

D. n = 81

E. n = 100

3. **If the expression for number of line segments is 5n + 3, then find the number of line segments for**

   A. n = 15

   B. n = 40

   C. n = 108

   D. n = 253

4. **Observe the pattern given below and answer the following questions.**

   5 × 1 + 2 = 7 for 1st term

   5 × 2 + 2 = 12 for 2nd term

   5 × 3 + 2 = 17 for 3rd term

   5 × 4 + 2 = 22 for 4th term

   A. Find the nth term of the above given pattern.

   B. Write down 18th term of given pattern.

   C. Write down 49th term of given pattern.

   D. Find the addition of 65th term and 78th term.

5. **Observe the following pattern and fill in the blanks on the basis of given pattern:**

   6 × 1 + 4 = 10

   6 × 2 + 4 = 16

   6 × 3 + 4 = 22

   6 × 4 + 4 = 28

   So, the expression for the nth term is 6n + 4.

   A. 6 × 8 + _____ = _____

   B. 6 × _____ + _____ = 66

   C. _____ × _____ + _____ = 96

   D. 6 × _____ + _____ = 618

6. **Express the following as formula:**

   A. The price of one item is p. The cost (c) of n items is _____.

   B. The perpendicular (p) of a regular polygon of n sides with each side of length l is p = _____.

   C. The Area (A) of a rectangle with length (l) and breadth (b) is A = _____.

   D. The perimeter (p) of a square of side x is p = _____.