Salas, Amor Corazon F.

BSCS-4
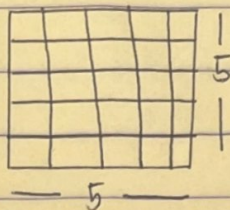
Discrete Structures - Assign 2

• **SQUARE NUMBERS**

Perfect square is nothing but an integer that's the square of an integer; in other words, it's the product of some number with itself.
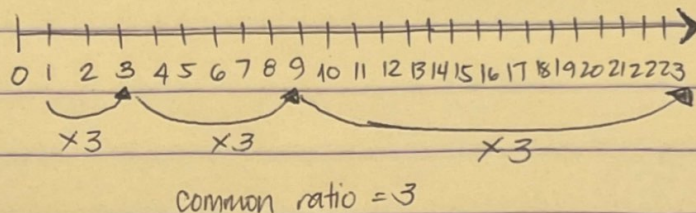
$$5^2 = 25$$

$$5 \times 5 = 25$$

• **GEOMETRIC SEQUENCE**

This is made by multiplying by the same value each time. What we multiply each time is called "common ratio."

$$1, 3, 9, 27, 81, 243, \ldots$$

$\times 3 \qquad \times 3 \qquad \times 3$

Common ratio = 3

• **PASCAL'S TRIANGLE**

A triangular arrangement of numbers that gives coefficients in the expansion of any binomial expression. The numbers are arranged so they reflect a triangle. Firstly, 1 is placed at the top, and then we start putting the numbers in a triangular pattern.

```
                    1        ↗ ones
                  1   1      → counting numbers
                1   2   1    → triangular numbers
              1   3   3   1
            1   4   6   4   1
          1   5  10  10   5   1
        1   6  15  20  15   6   1
      1   7  21  35  35  21   7   1
    1   8  28  56  70  56  28   8   1
```