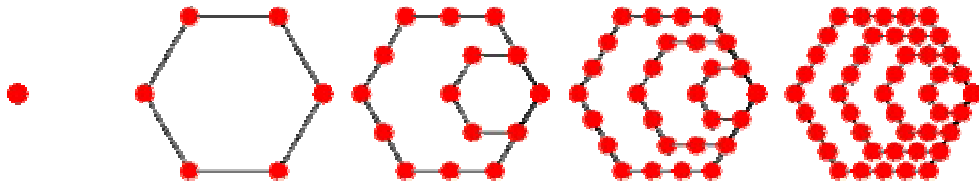


Hexagonal Numbers:



A. A hexagonal number is a number that creates a hexagon. In other words: 1,6,15,28,etc.

B. The n^{th} hexagonal number can be found by the following:

$$n(2n - 1)$$

C. In number sense, the question will only ask for the n^{th} hexagonal number.

Ex [1] The 8^{th} hexagonal number is _____.

- Using the formula we get: $8 \times 15 = 120$.
- The answer is 120.

Ex [2] The 13^{th} hexagonal number is _____.

- Using the formula we get: $13 \times 25 = 325$.
- The answer is 325.

D. Here are some ways of manipulating hexagonal numbers:

1. The difference of successive hexagonal numbers is:

$$4n - 3, \text{ where } n \text{ is the largest}$$

2. Adding successive hexagonal numbers gives:

$$4n^2 - 6n + 3, \text{ where } n \text{ is the largest}$$

NOTE: You might see #1 on a test, but I doubt you will ever see #2 on a test.