1. What happens when you multiply the triangular numbers by 6 and add 1?
   A. You get cube numbers
   B. You get square numbers
   C. You get odd numbers
   D. You get even numbers (B)

Explanation : When you multiply the triangular numbers by 6 and add 1, you get square numbers, as shown in the provided sequence.

2. The sequence 1, 7, 19, 37, 61 is an example of:
   A. Square numbers
   B. Cube numbers
   C. Hexagonal numbers
   D. Fibonacci sequence (C)

Explanation: The sequence 1, 7, 19, 37, 61 represents hexagonal numbers, a type of number formed by dots arranged in a hexagonal shape.

3. When you add consecutive hexagonal numbers, you get:
   A. Fibonacci numbers
   B. Square numbers
   C. Triangular numbers
   D. Cube numbers (B)

Explanation: The sum of consecutive hexagonal numbers results in square numbers, as demonstrated with the sequence of sums.

4. The sequence 1, 8, 27, 64, 125 is an example of:
   A. Fibonacci numbers
   B. Cube numbers
   C. Triangular numbers
   D. Square numbers (B)

Explanation: The sequence 1, 8, 27, 64, 125 represents cube numbers (1^3, 2^3, 3^3, 4^3, 5^3).

5. When you add powers of 2 (i.e., 1, 1 + 2, 1 + 2 + 4, ...), what sequence do you get?
   A. Powers of 3
   B. Triangular numbers
   C. Square numbers
   D. Fibonacci sequence (C)

Explanation : Adding the powers of 2 results in square numbers when you add 1 to each sum.

6. The number 8 in the sequence 1, 8, 27, 64, 125 can be visualized as a:
   A. Square shape
   B. Cube shape
   C. Triangular shape
   D. Pyramid shape (B)

Explanation : The number 8 is the first cube number, and it can be visualized as a cube.

7. When you start to add hexagonal numbers, i.e., take 1, 1 + 7, 1 + 7 + 19, what sequence do you get?
   A. Square numbers
   B. Cube numbers
   C. Fibonacci numbers
   D. Odd numbers (A)

Explanation : Adding hexagonal numbers results in square numbers, such as 1, 8, 27, and so on.

8. What happens when you start adding powers of 2 starting with 1, i.e., 1, 1 + 2, 1 + 2 + 4, 1 + 2 + 4 + 8, etc.?
   A. You get triangular numbers
   B. You get Fibonacci numbers
   C. You get square numbers
   D. You get powers of 2 (C)

Explanation : The sums of the powers of 2 give you square numbers when you add 1 to each sum.

9. What does the picture with cubes represent in the sequence 1, 8, 27, 64, 125?
   A. Powers of 3
   B. Fibonacci sequence
   C. Cube numbers
   D. Triangular numbers (C)

Explanation : The cubes in the picture represent cube numbers (1^3, 2^3, 3^3, 4^3, 5^3).

10. Which of the following patterns does not appear in the chapter?
    A. Square numbers
    B. Cube numbers
    C. Fibonacci sequence
    D. All of the above appear (D)

Explanation : All the mentioned patterns (square numbers, cube numbers, and Fibonacci sequence) are discussed in the chapter.