Name:

**Cube - It Design Worksheet**

On this worksheet, you will investigate how increasing the linear dimensions of a cube affects its volume.

**My Starting Shape n = 1**

Shape Name: Cube Starting Width: 1

Starting Length: 1 Starting Height: 1

**Growth Equations (*n* represents the stage of growth)**

Length: 2n - 1

Width: 2n - 1

Height: 2n -1

**Dimensions for Growth n = 2**

Length: Width: Height:

**Dimensions for Growth n = 3**

Length: Width: Height:

**Dimensions for Growth n = 4**

Length: Width: Height:

**Drawings**

Drawing n = 1

Drawing n = 2

Drawing n = 3

Drawing n = 4

**Tables of Dimension**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Object (n)** | **Length** | **Width** | **Height** | **Volume** |
| 1 |  |  |  |  |
| 2 |  |  |  |  |
| 3 |  |  |  |  |
| 4 |  |  |  |  |

**Object Growth Description:** how does the volume change given a linear change in the side lengths?