

*Imagine a large cube made up from 27 smaller red cubes. Dip the large cube into the yellow paint and complete the first row of the table.*

**# OF BLOCKS PAINTED ON:**

Size of Large Cube	3 Faces	2 Faces	1 Faces	No Faces	TOTAL # of BLOCKS
3x3x3					
4x4x4					
5x5x5					
6x6x6					
7x7x7					
10x10x10					
23x23x23					
n					

How many vertices are there in a cube? \_\_\_\_\_

How many faces are there in a cube? \_\_\_\_\_

How many edges are there in a cube? \_\_\_\_\_

Show that the sum of the expressions you wrote using n for 3,2,1,0 sides =  $n^3$  (the # of blocks)