

Name _____

Slicing and Dicing

Tim has a solid wooden cube with whole number dimensions. He paints the entire surface of the cube red. Then, with slices parallel to the faces of the cube, Tim cuts the cube into $1 \times 1 \times 1$ cubes.



*Let x be the number of the small cubes that are completely free of paint.
Let y be the number of small cubes that are painted red on only one side.*

If y is twice as big x , what was Tim's original cube size?

What if x is twice as big as y ?
What would Tim's original cube size be then?
Do you think it will be the same size?

