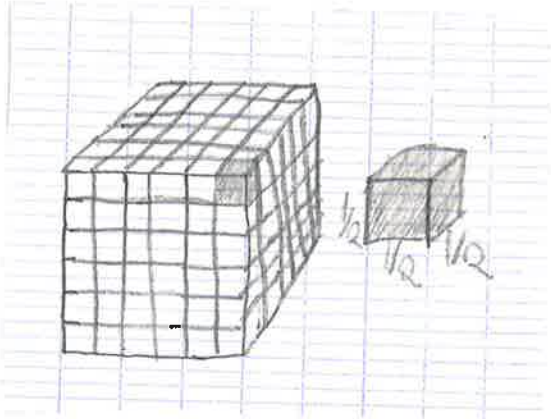


Penelope May
Mrs. Joshi

Question- Tracy said the volume of this was $3 \times 3 \times 3$. Mark said it was $6 \times 6 \times 6 \times \frac{1}{8}$. Who is correct? Explain your reasoning.

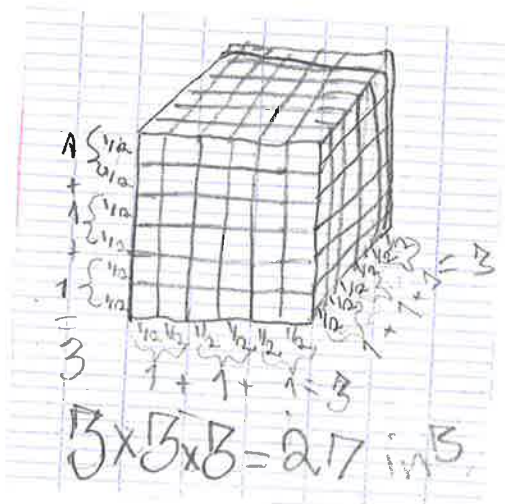


Claim-

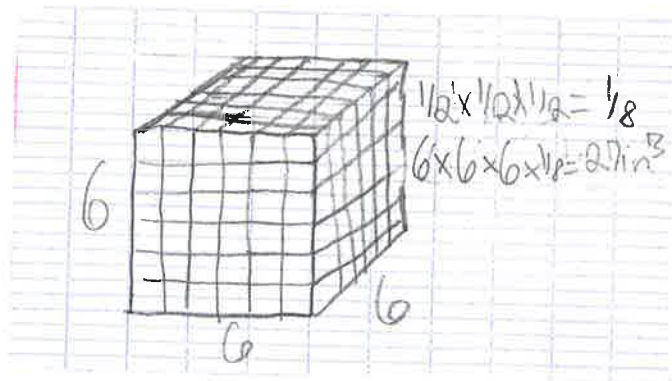
Tracy and mark were both right but they used different methods

Data-

Tracys way



Marks way



Commentary-

TRACY

- Tracy needed to know the length width and height of the box
- For length, she counted the number of cubes along
- She counted six
- Then she multiplied six by the size of a cube which is $\frac{1}{2}$
- $6 \times \frac{1}{2}$ is equal to 3
- That is how she found the length, she does the same for the width and the height
- For the width we count 6 cubes and times is by $\frac{1}{2}$ which is three
- Now for the height we count 6 cubes and times is by $\frac{1}{2}$ which is three
- she has the length width and height
- To get the volume you multiply length width and height $3 \times 3 \times 3$ and that is 27

MARK

- Mark needs to know the number of cubes in the box
- He counts the number of cubes along the length
- He counts the number of cubes along the height
- He counts the number of cubes along the width
- If he multiplies those three numbers he gets the total number of cubes
- $6 \times 6 \times 6$ is 216
- So now he knows there are 216 cubes
- Next he needs to know the volume of one cube
- The volume of one cube is $\frac{1}{2} \times \frac{1}{2} \times \frac{1}{2}$ which is $\frac{1}{8}$
- To find the volume of the whole box you multiply 216 by $\frac{1}{8}$
- Which is 27

Tracy and mark have the same answer just different methods