



Volume with fractional edge lengths

GRADE 6 MATH

Name _____

Date _____

Work in order. Show the three edge lengths you multiplied; final answers in the boxes with cubic units.
One skill: **volume with fractional edge lengths**.

WORKED EXAMPLE

$V = l \times w \times h$, fractions included. Turn mixed numbers into improper fractions first: $2\frac{1}{2} = \frac{5}{2}$.
Volume is **cubic** units because you are filling three directions at once.

1. Find the volume of a prism 2 by 3 by 4.

FLUENCY

Show your thinking

Answer

2. Find the volume of a cube with edge $\frac{1}{3}$ unit.

FLUENCY

Show your thinking

Answer

3. Find the volume of a prism 5 by 2 by 3.

FLUENCY

Show your thinking

Answer

4. Find the volume of a prism $3\frac{1}{2}$ by 2 by 4.

APPLICATION

Show your thinking

Answer

5. Find the volume of a prism $\frac{3}{4}$ by 2 by 8.

APPLICATION

Show your thinking

Answer

6. Find the volume of a prism $2\frac{1}{2}$ by $1\frac{1}{2}$ by 4.

APPLICATION

Show your thinking

Answer

7. How many cubes of edge $\frac{1}{2}$ unit fit inside a box 2 by $1\frac{1}{2}$ by 1? Show how you counted along each edge.

REASONING

Show your thinking

Answer

8. A prism has volume 24 cubic units, width 2 and height 3. Find its length and explain your method.

REASONING

Show your thinking

Answer

9. A cube has edge 2 units. One student says the answer is 8, another says 24. One found volume and one found surface area. Which is which, and how can you tell?

REASONING

Show your thinking

Answer