



GRADE 7 · GEOMETRY · PRACTICE

VOLUME OF COMPOSITE SOLIDS

Today's goal: I can determine the volume of three-dimensional objects composed of cubes and right prisms in mathematical problems and determine the volume of three-dimensional objects composed of cubes and right prisms in real-world problems.



Pick your peppers!

Everyone does Mild & Medium. Then climb as high as you can.



Mild

Tan the Turtle



Medium

Digit the Fox



Spicy

Blaze the Dragon



Extra Spicy

Pi the Owl

WATCH MR DJ SOLVE

Find the volume of a box 6 by 3 by 4.

1 $6 \times 3 \times 4 = 72$.

Answer: **72 cubic units**



REMEMBER

$V = Bh$. Find the area of the base first, then multiply by the height or length. For composite solids, split into prisms and add — or find the whole and subtract what is missing. Never add a removed piece.



MILD

Tan the Turtle: Slow and steady. Warm up!

1 Find the volume of a box 6 by 3 by 2.

Answer



OOPS ALERT

Careful on #1! Blaze spotted the slip Mr DJ sees most: Added the edges.



🔊 **MEDIUM**

Digit the Fox: Stretch your brain.

- 2 Those two boxes are stacked, matching 6 by 3 faces. Find the total volume.

Answer

- 3 An L-shaped base is made from a 5 by 2 rectangle and a 4 by 3 rectangle. Find the area of the base.

Answer

- 4 A prism has that L-shaped base and is 5 units tall. Find its volume.

Answer

- 5 An 8 by 5 by 4 box has a 3 by 2 by 4 hole cut right through. Find the remaining volume.

Answer



SPICY

Blaze the Dragon: Bring the heat!

- 6 Find the volume of a single box 6 by 3 by 6. What do you notice?

Answer

- 7 In question 5, why does the hole's third dimension have to be 4?

Answer



EXTRA SPICY

Pi the Owl: Big-brain challenge.

- 8 A student answers question 5 as 184 cubic units. Find their error and explain why the answer is impossible without doing any arithmetic.

Answer



How did this sheet feel?



Easy for me



Just right



Made me think

Stuck? Watch Mr DJ explain it

Step-by-step video lessons on YouTube: [youtube.com/@MathWithMrDJ](https://www.youtube.com/@MathWithMrDJ)

Brain break: daily puzzles

Three new math puzzles every day, free: puzzles.mathwithmrdj.com