



GRADE 7 · GEOMETRY · HOMEWORK

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 7 by 2 by 5.

1 $7 \times 2 \times 5 = 70$.

Answer: **70 cubic units**



REMEMBER $V = Bh$, where B is the AREA of the base. Split composite solids into prisms and add, or find the whole and subtract what was removed. An answer larger than the whole solid is impossible.



FAMILY CORNER

No need to remember this math yourself! Ask your student to teach you Mr DJ's example, then try the first Mild problem together.



MILD

Tan the Turtle: Slow and steady. Warm up!

1 Find the volume of a box 7 by 2 by 3.

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 are stacked on matching 7 by 2 faces. Find the total volume.

Answer

- 3 A 9 by 4 by 3 box has a 2 by 2 by 3 hole cut right through. Find the remaining volume.

Answer

**SPICY****Blaze the Dragon:** Bring the heat!

- 4 Find the volume of a single box 7 by 2 by 8. Explain why it matches question 2.

Answer

- 5 A triangular prism has a triangular base with base 5 and height 4, and is 6 units long. Find B, then find the volume.

Answer

- 6 Explain how you could tell your answer to question 3 was reasonable before finishing the arithmetic.

Answer



EXTRA SPICY

Pi the Owl: Big-brain challenge.

- 7 A student finds the volume of the triangular prism in question 5 as 120 cubic units. Find their error and state what B actually is.

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