



GRADE 7 · GEOMETRY · PRACTICE

SURFACE AREA OF PRISMS

Today's goal: I can determine the surface area of three-dimensional prisms in mathematical problems and determine the surface area of three-dimensional 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 that cube.

1 $4 \times 4 \times 4 = 64$ cubic units.

Answer: **64 cubic units**



REMEMBER

Surface area = the total area of all faces. Rectangular prism: **six** faces, three pairs. Triangular prism: **five**. General rule: **SA = 2B + Ph** — two bases, plus the band around the outside. Units are squared.



MILD

Tan the Turtle: Slow and steady. Warm up!

1 Find the surface area of a box 6 by 3 by 2.

Answer

2 Find the volume of that box.

Answer



OOPS ALERT

Careful on #1! The slip Mr DJ sees most: Answered 36 by counting one of each pair.

**MEDIUM****Digit the Fox:** Stretch your brain.

- 3 Find the surface area of a cube with edge 4.

Answer

- 4 A triangular prism has ends with base 8 and height 3, is 12 long, with side lengths 5, 5 and 8. Find its surface area.

Answer

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

- 5 A student says the surface area of the box in question 1 is 36. Which quantity is 36, and what did they most likely do?

Answer

- 6 How many faces does that prism have? List them.

Answer

- 7 Use $SA = 2B + Ph$ to find the surface area of the box in question 1, and show it matches.

Answer



EXTRA SPICY

Pi the Owl: Big-brain challenge.

- 8 Explain why $SA = 2B + Ph$ works for both a rectangular and a triangular prism, when the six-face method does not.

Answer



How did this sheet feel?



Easy for me



Just right



Made me think

Stuck? Watch Mr DJ explain it

"Surface Area of Prisms — Step by Step Guide" on YouTube:
[youtube.com/@MathWithMrDJ](https://www.youtube.com/@MathWithMrDJ)

Brain break: daily puzzles

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