

Unit 1 Lesson 16: Distinguishing Between Surface Area and Volume

1 Attributes and Their Measures (Warm up)

Student Task Statement

For each quantity, choose one or more appropriate units of measurement.

For the last two, think of a quantity that could be appropriately measured with the given units.

Quantities

1. Perimeter of a parking lot:
2. Volume of a semi truck:
3. Surface area of a refrigerator:
4. Length of an eyelash:
5. Area of a state:
6. Volume of an ocean:
7. _____: miles
8. _____: cubic meters

Units

- millimeters (mm)
- feet (ft)
- meters (m)
- square inches (sq in)
- square feet (sq ft)
- square miles (sq mi)
- cubic kilometers (cu km)
- cubic yards (cu yd)

2 Building with 8 Cubes (Optional)

Student Task Statement

Your teacher will give you 16 cubes. Build two different shapes using 8 cubes for each. For each shape:

1. Give it a name or a label (e.g., Mai's First Shape or Diego's Steps).
2. Determine the **volume**.
3. Determine the surface area.
4. Record the name, volume, and surface area on a sticky note.

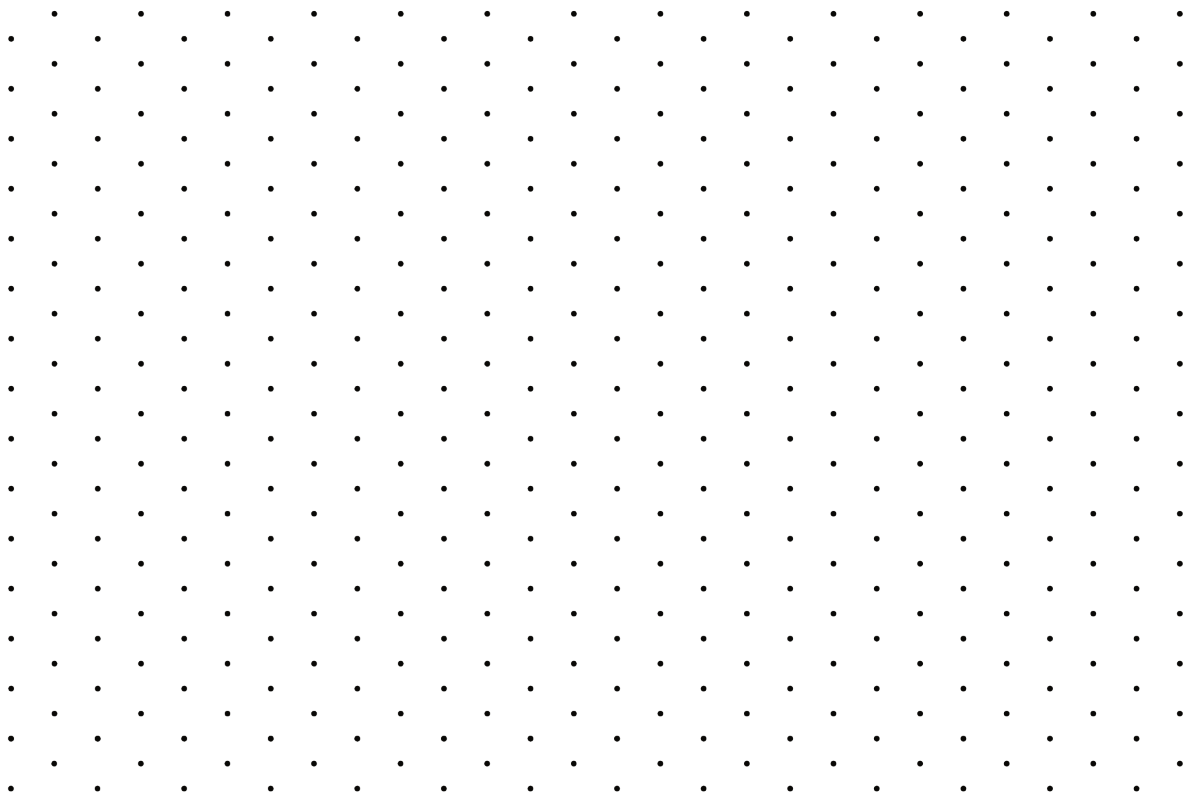
3 Comparing Prisms Without Building Them (Optional)

Student Task Statement

Three rectangular prisms each have a height of 1 cm.

- Prism A has a base that is 1 cm by 11 cm.
- Prism B has a base that is 2 cm by 7 cm.
- Prism C has a base that is 3 cm by 5 cm.

1. Find the surface area and volume of each prism. Use the dot paper to draw the prisms, if needed.



2. Analyze the volumes and surface areas of the prisms. What do you notice? Write 1 or 2 observations about them.