

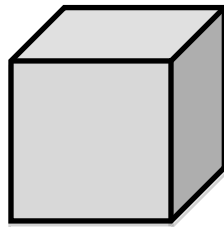
7th Grade Geometry Domain

Standard 3: Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.

Slicing a Solid

Materials:

- Handful of cubes/or straw cube/ or Sargento cheese/ or play doh/ or clay sticks or for each group
- Voting plan per person i.e. clickers or slates/markers (optional)
- Applet
http://www.learner.org/courses/learningmath/geometry/session9/part_c/index.html
<http://www.wou.edu/~burtonl/flash/SandBox.html>
<http://www.wou.edu/~burtonl/flash/SandBox.html>



1. Describe the 2-dimensional figure that will result when we slice a solid rectangular prism parallel to the end faces. Explain your thinking.
2. Describe the 2-dimensional figure that will result when we slice a solid rectangular prism parallel to the base. Explain your thinking.
3. Show how you could slice a cube to get a triangle.
4. Show how you could slice a cube to get a rectangle that is not a square.
5. Is it possible to create other polygons from slicing a cube? Show what is possible.

6. Are there polygons that are not possible to create when slicing a cube? Explain how you know.

7. Is it possible to create other polygons? Explore the applet.

Task 1- 6th grade Geometry Focus

Little Bo Peep has attended assertiveness training. She plans to fence her pasture. She created a sketch on a coordinate plane to model her task, so that each unit represents 1 meter.

She will place fence posts at the vertices.

Plot these vertex points and draw the polygonal enclosure.

$(-6, 8)$, $(0, 8)$, $(10, 6)$, $(10, -4)$, $(-6, -4)$

Determine the area of the enclosure. Explain your reasoning.

- Display & explain your solution on the chart paper. Include your sketch. Pair share or group- discuss what is intended by the standard. What types of tasks would support the standard?

Debrief:

Use group presentations or a gallery walk to share solutions.

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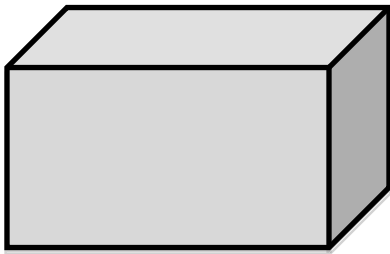
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8. Describe the 2-dimensional figure that will result when we slice a solid rectangular prism parallel to the end faces. Explain your thinking.

9. Describe the 2-dimensional figure that will result when we slice a solid rectangular prism parallel to the base. Explain your thinking.

10. Describe the 2-dimensional figure that will result when we slice a solid rectangular prism parallel to the end faces. Explain your thinking.

Procedure

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