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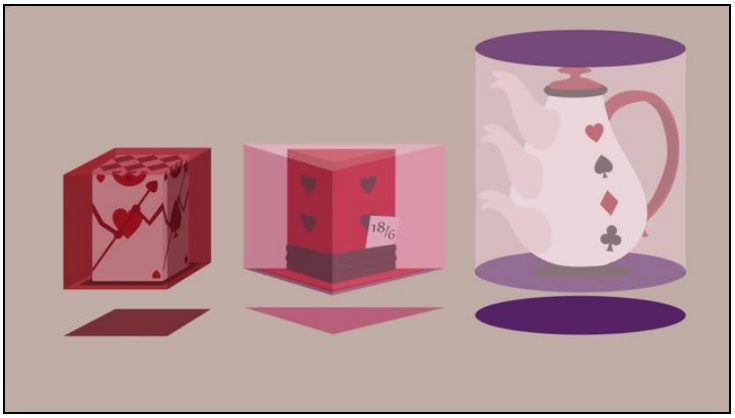
Volume of Simple 3D Shapes



1. **Identify the shapes.**
2. Decide which statements about volume are true.
3. Determine the volume of a cylinder.
4. Identify formulas for the 3-D objects and their cross sections.
5. Solve these real world problems.
6. Find mistakes in the volume calculations.
+ with lots of tips, answer keys, and detailed answer explanations for all of the problems.

Identify the shapes.

Match the elements.

A
us.sofatutor.com/ep/2EF7

B
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C
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D
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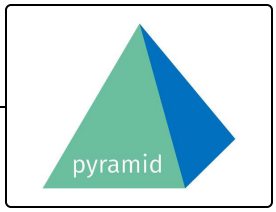
1


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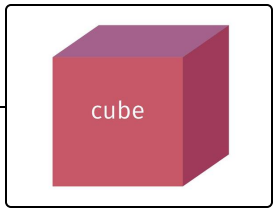

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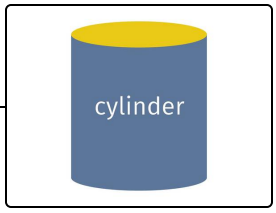

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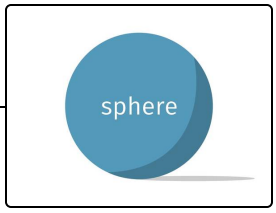

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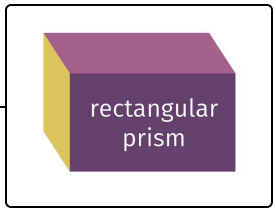

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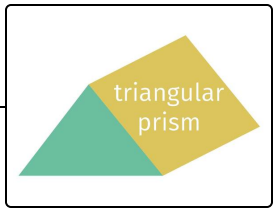


Hints for solving these problems

1 of 6

Identify the shapes.

Hint #1

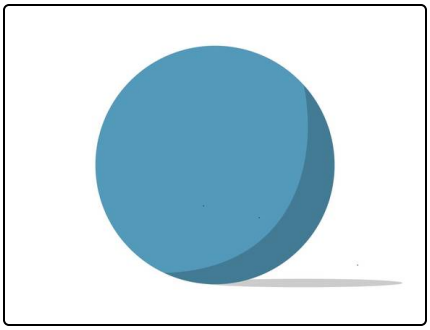
Each prism has a base and a top face which are congruent.

Hint #2

A pyramid has a base and a peak.

Each corner of the base, for example a square or a rectangle, is connected with this peak.

Hint #3



Here you see a sphere. This is not a prism.

Answers and detailed answer explanations for these problems

1 of 6

Identify the shapes.

Answer key: A—5 // B—6 // C—3 // D—2

What are the common features of prisms?

- The bottom and top faces are congruent.
- They consist of the bottom and top faces, plus several rectangles or a curved surface

Six faces which are rectangles could indicate a **rectangular prism** or as a special case a **cube**:

A **cube** has only squares as faces. All of the six faces are congruent.

A prism with a **circle** as the bottom and top face is called a **cylinder**.

Last, we have to investigate a prism with triangles as the bottom and top faces: This is a **triangular prism**.