



Cross-sections of solids

GRADE 7 MATH

Name _____

Date _____

Do this on your own — the worked example shows what to do. Say what the knife meets, then name the shape. One skill: **cross-sections**.

WORKED EXAMPLE

Ask what the knife meets. Flat faces give straight edges. A curved surface gives a curved edge only when the knife travels around it. Direction matters as much as the solid.

1. A cylinder is sliced horizontally. What shape is the cross-section?

FLUENCY

Show your thinking

Answer

2. A cylinder is sliced vertically. What shape?

FLUENCY

Show your thinking

Answer

3. A square-based pyramid is sliced vertically through the apex. What shape?

APPLICATION

Show your thinking

Answer

4. The same pyramid is sliced horizontally. What shape?

APPLICATION

Show your thinking

Answer

5. A cone is sliced vertically through the apex. What shape?

APPLICATION

Show your thinking

Answer

6. A sphere is sliced horizontally. What shape?

FLUENCY

Show your thinking

Answer

7. Which solids on this sheet give a triangle when sliced vertically through the top point? What do those solids have in common?

REASONING

Show your thinking

Answer

8. Explain why a rectangular prism gives a rectangle whichever way you slice it, but a cylinder does not.

REASONING

Show your thinking

Answer