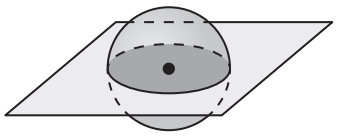
Name_____ Date _____

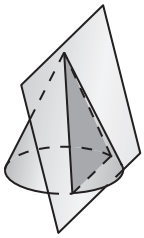
1.3 Practice A

In Exercises 1–3, describe the cross section formed by the intersection of the plane and the solid.

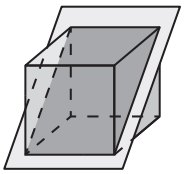
1.



2.

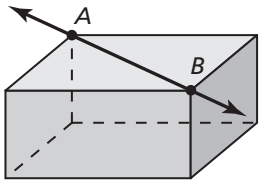


3.

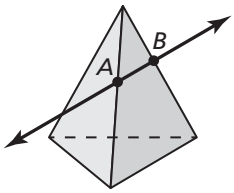


In Exercises 4–6, draw the cross section formed by the described plane that contains $\overleftrightarrow{AB}$. What is the shape of the cross section?

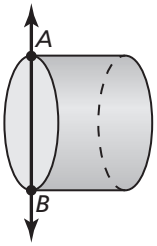
4. plane is perpendicular to base



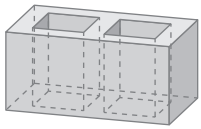
5. plane is parallel to base



6. plane is perpendicular to base



7. Draw a cross section formed by a vertical plane that divides the solid into two congruent parts. Is there more than one way to use a vertical plane to divide the figure into two congruent parts? If so, does the cross section change? Explain.



8. Sketch a cube. Is it possible for a cross section of a cube to be a square? Explain your reasoning. If so, describe or sketch two different ways in which the plane could intersect the solid.

9. Consider the rectangular prism in Exercise 4. The length of the prism is 4 inches, the width is 2 inches, and the height is 2 inches.

a. What is the perimeter of the cross section?

b. What is the area of the cross section?