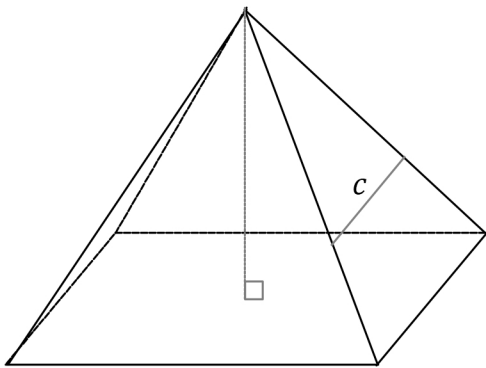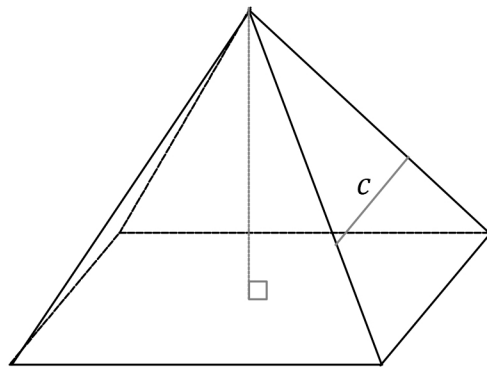# Slicing a Right Rectangular Pyramid with Plane

Two copies of the same right rectangular pyramid are shown below. Draw in the slice perpendicular to the base and the slice parallel to the base. Then, sketch the resulting slices as two-dimensional figures.
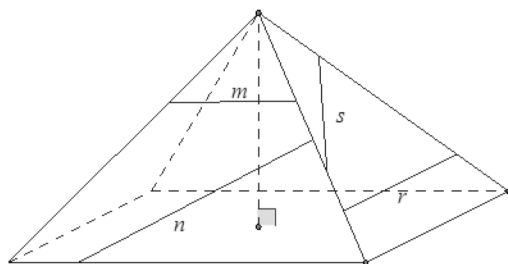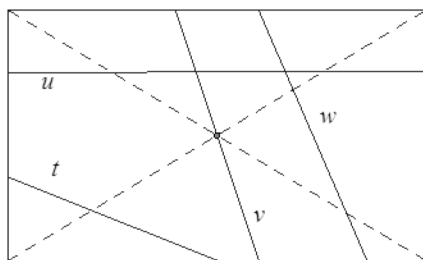

Slice Perpendicular to Base   Slice Parallel to Base

1. A side view of a right rectangular pyramid is given. The line segments lie in the lateral faces.

    a. For segments   , , and   , sketch the resulting slice from slicing the right rectangular pyramid with a slicing plane that contains the line segment and is perpendicular to the base.

    b. For segment   , sketch the resulting slice from slicing the right rectangular pyramid with a slicing plane that contains the segment and is parallel to the base.
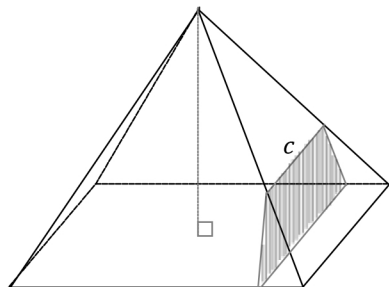
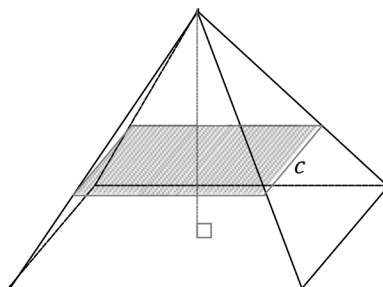   *Note:* To challenge yourself, you can try drawing the slice into the pyramid.

    c. A top view of a right rectangular pyramid is given. The line segments lie in the base face. For each line segment, sketch the slice that results from slicing the right rectangular pyramid with a plane that contains the line segment and is perpendicular to the base.

Two copies of the same right rectangular pyramid are shown below. Draw in the slice perpendicular to the base and the slice parallel to the base. Then, sketch the resulting slices as two-dimensional figures.
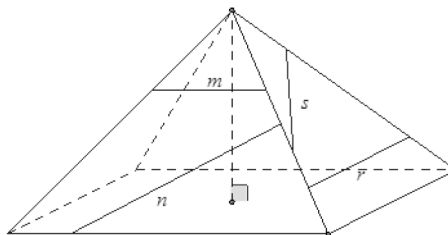
c

c

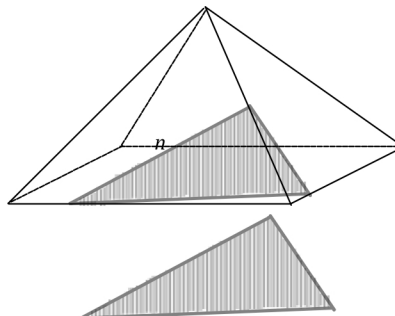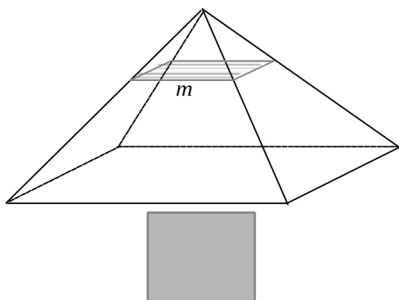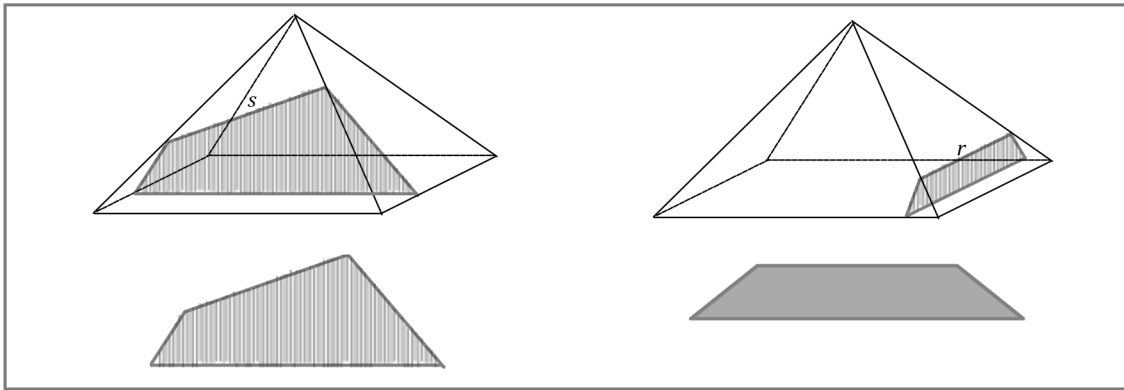**Slice Perpendicular to Base**   **Slice Parallel to Base**

1. **A side view of a right rectangular pyramid is given. The line segments lie in the lateral faces.**

    a. **For segments   ,   , and   , sketch the resulting slice from slicing the right rectangular pyramid with a slicing plane that contains the line segment and is perpendicular to the base.**

    b. **For segment   , sketch the resulting slice from slicing the right rectangular pyramid with a slicing plane that contains the segment and is parallel to the base.**
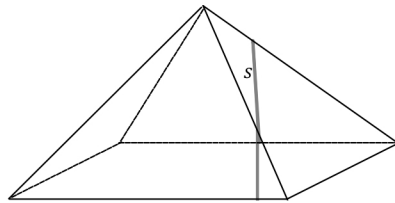
    m
    s
    n
    r

    Note: **To challenge yourself, you can try drawing the slice into the pyramid.**

    m

    n

Note that the diagram for the slice made through   is from a perspective different from the one in the original pyramid. From the original perspective, the slice itself would not be visible and would appear as follows:

c.   A top view of a right rectangular pyramid is given. The line segments lie in the base face. For each line segment, sketch the slice that results from slicing the right rectangular pyramid with a plane that contains the line segment and is perpendicular to the base.