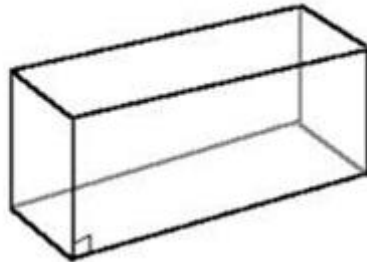Aim: What are cross-sections of 3D shapes?

Do Now: Take a look at the three-dimensional figure below. Use your pencil to draw the different ways you could slice through the figure.
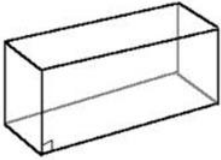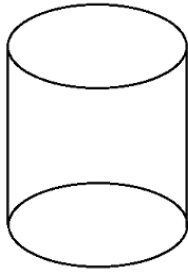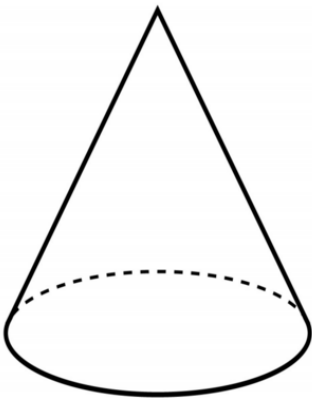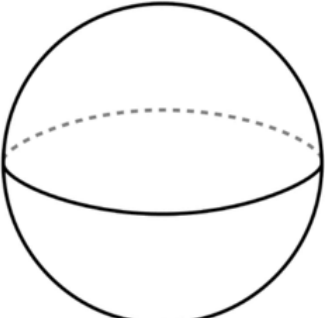
What do you think a cross section is?

_____

_____

- -

Cross Sections with Playdough! 😮

	Vertical Cross Section	Horizontal Cross Section	Diagonal Cross Section
Rectangular Prism			
Cylinder			

Cone			
Sphere			

Practice Problems

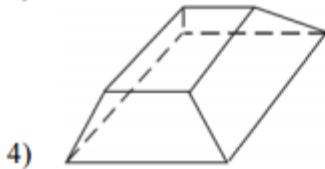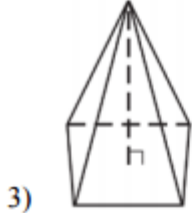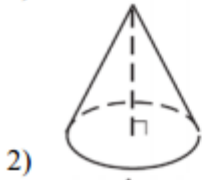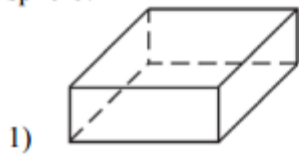1. Describe and draw the cross-section shape resulting from cutting the figures below.

2. If you have a gift box like the one shown below, which shape cross-section would be impossible to get?

A.

B.

C.

D.

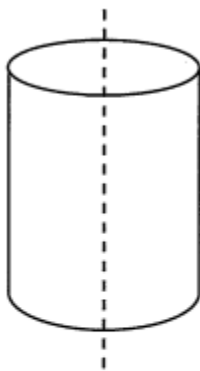3. Which figure can have the same cross section as a sphere?

1)

2)

3)

4)

4. William is drawing pictures of cross sections of the right circular cone below.

Which drawing can *not* be a cross section of a cone?

1)

2)

3)

4)

5. The cross section of a regular pyramid contains the altitude of the pyramid. The shape of this cross section is a
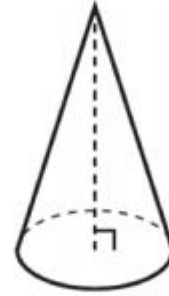1) circle
2) square
3) triangle
4) rectangle

6. A cross-section is cut from the cylinder below.

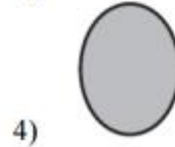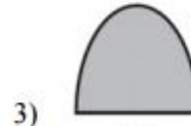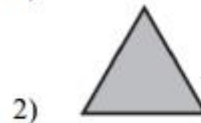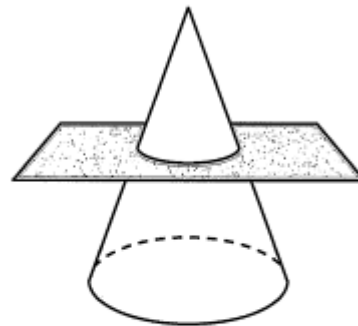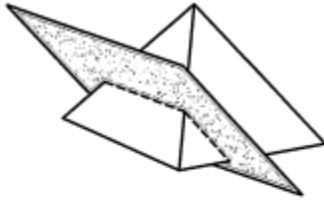What is the shape of the cross-section?

Ⓐ Rectangle

Ⓑ Circle

Ⓒ Semicircle

Ⓓ Oval

7. A cross-section is cut from the circular cone below.

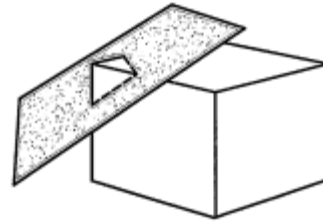What is the shape of the cross-section?

Ⓐ Square

Ⓑ Semicircle

Ⓒ Triangle

Ⓓ Circle

8. A square pyramid is cut along the shaded plane shown below.

Which of the following is the cross-section of this solid?

Ⓐ

Ⓑ

Ⓒ

Ⓓ

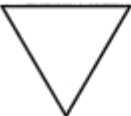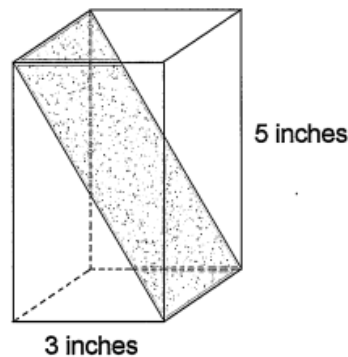9. A rectangular prism is cut along the shaded plane shown below.

Which of the following is the cross-section of this solid?

Ⓕ

Ⓖ

Ⓗ

Ⓙ

10. Andrew had a piece of foam in the shape of a rectangular prism as shown below. The base is a square with sides 3 inches long, and the piece is 5 inches tall. He cut the foam along the diagonal plane shown by the shaded area.

5 inches

3 inches

Which of the following is closest to the area of the shaded diagonal plane?

Ⓐ 19.3 square inches

Ⓑ 12 square inches

Ⓒ 15.8 square inches

Ⓓ 17.5 square inches