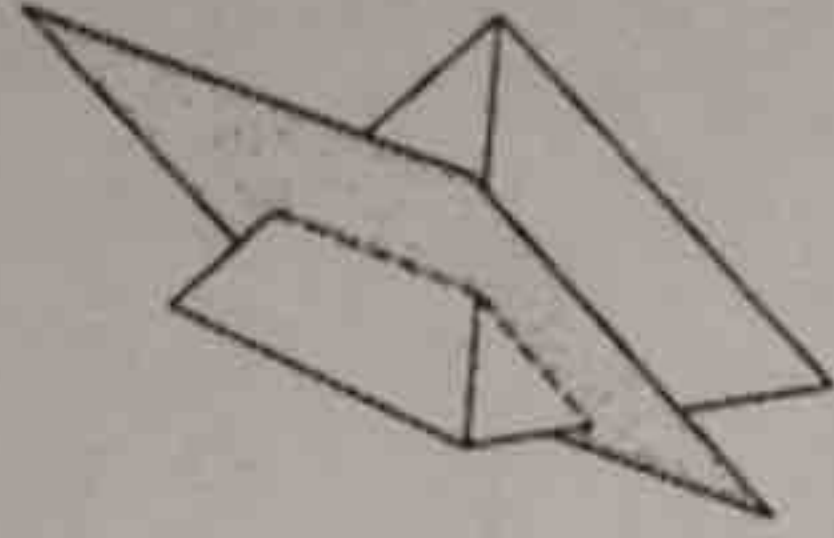# Homework 6.7: Cross Sections
Math 3

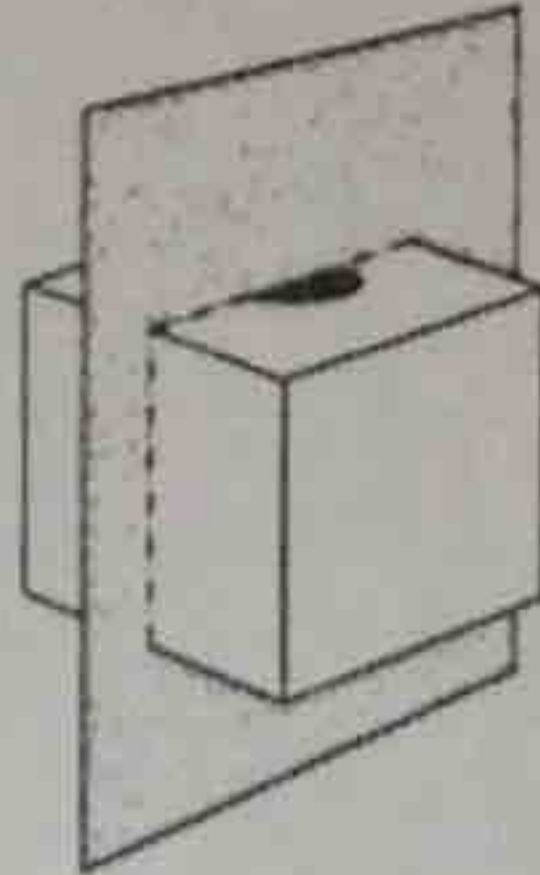Name: _____Key!_____

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

Which of the following is the cross-section of this solid?
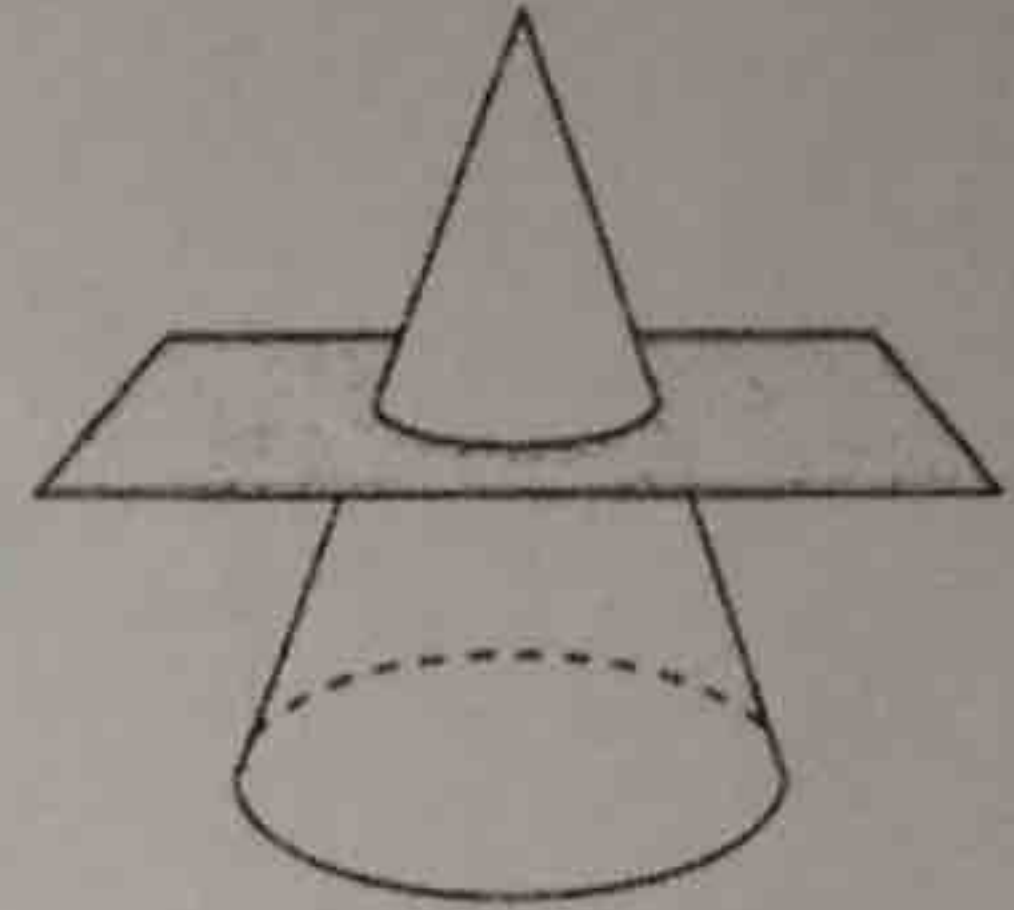
Ⓐ (square)

● (trapezoid)

Ⓒ (triangle)

Ⓓ (rectangle)

2 A cube with a cylinder cut from its center is cut along the plane shown below.

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

Ⓕ (square with notch)

● (two rectangles)

Ⓖ (square)

Ⓙ (square with circle)

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

What is the shape of the cross-section?

Ⓐ Square
Ⓑ Semicircle
Ⓒ Triangle
● Circle

4 A cube with a cylinder cut from its center is cut along the plane shown below.

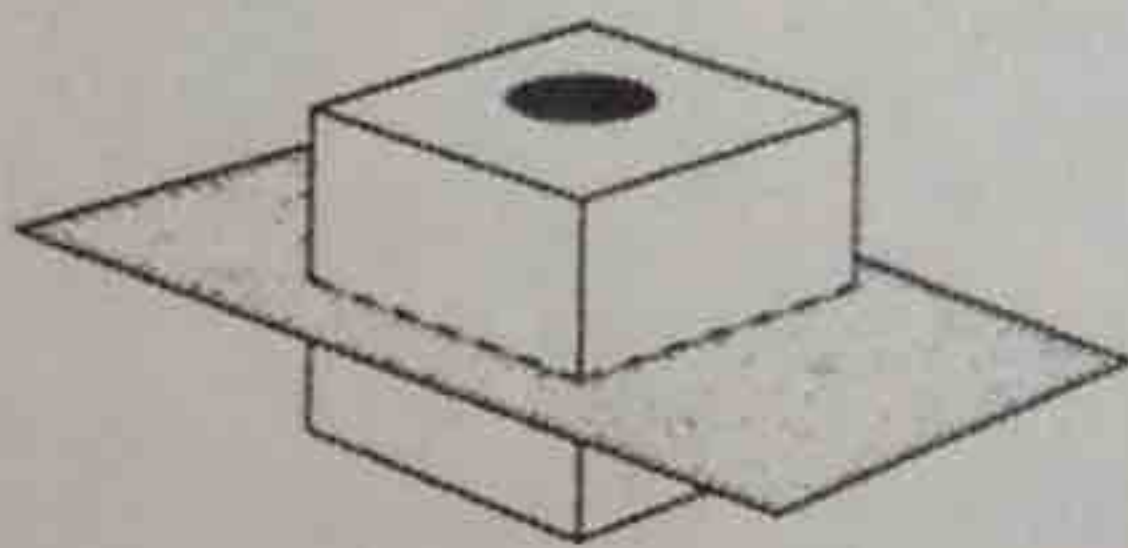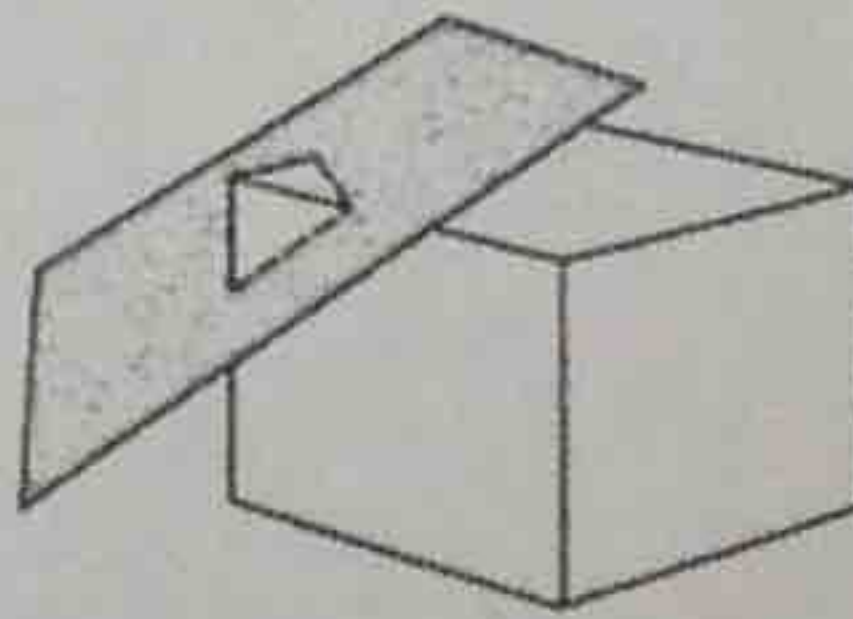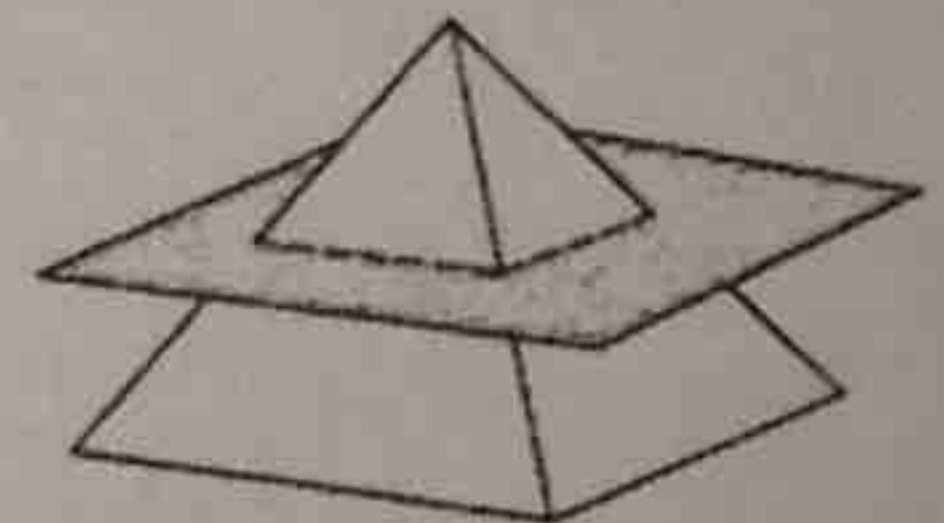Which of the following is the cross-section of this solid?

Ⓕ (square)

Ⓗ (square with circle)

Ⓖ (square with notch)

Ⓙ (circle)

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

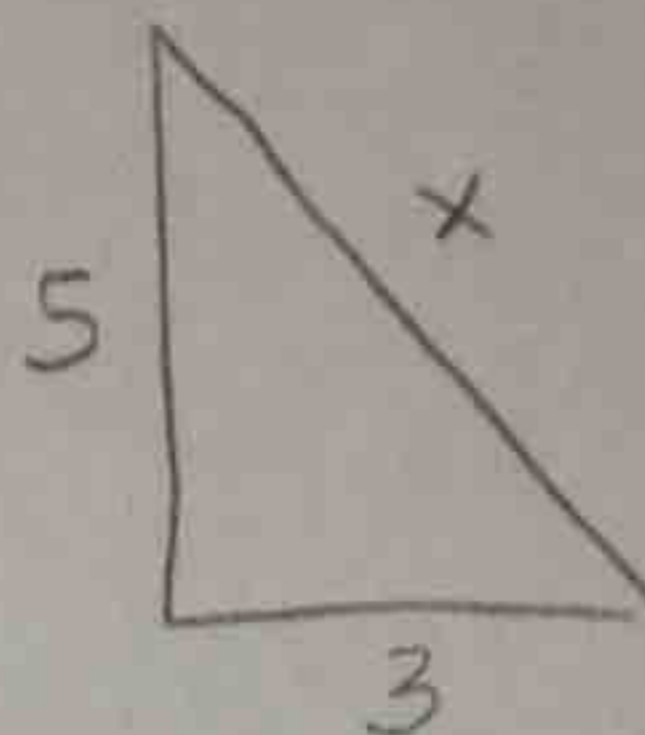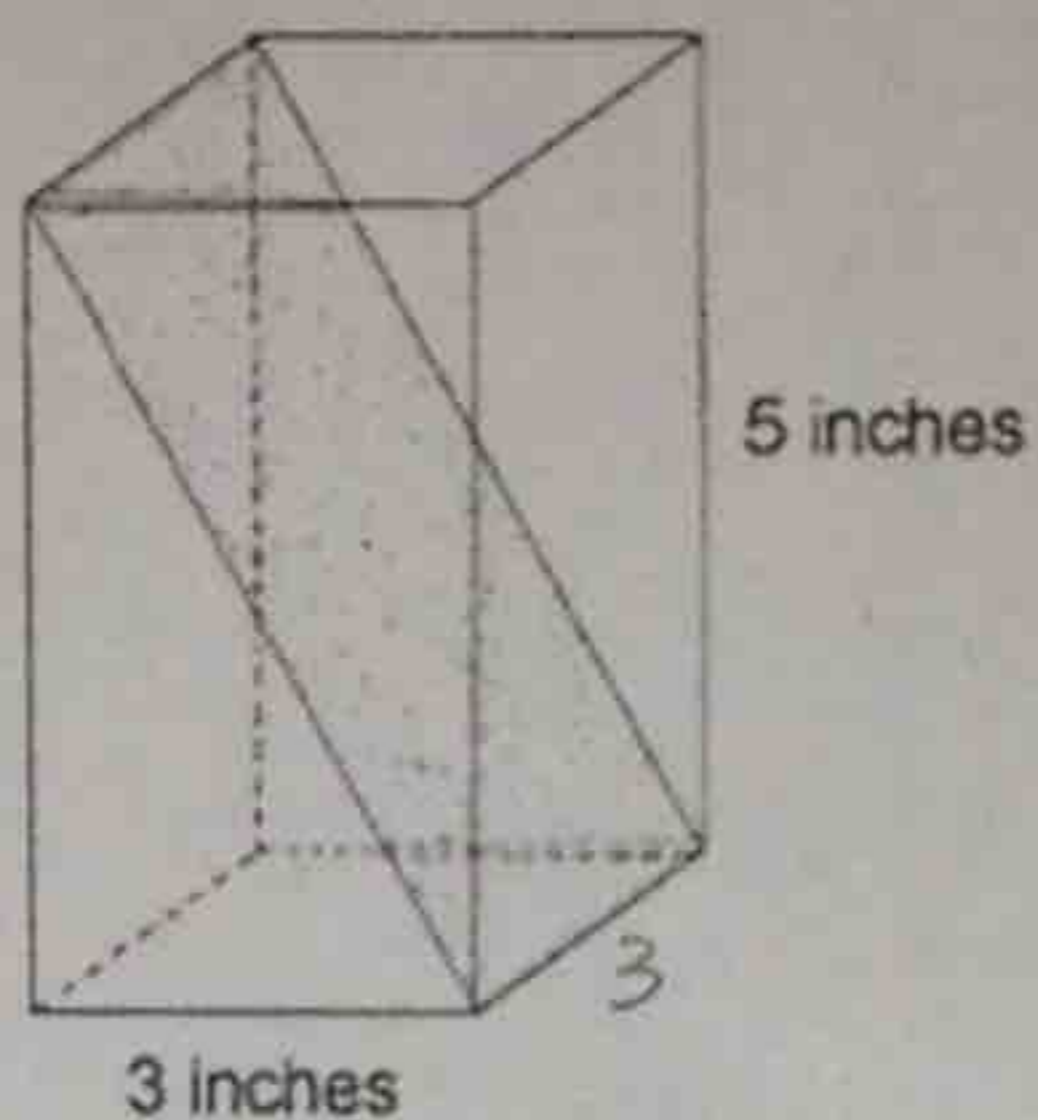Which of the following is the cross-section of this solid?

Ⓕ (rectangle)

Ⓖ (square)

● (inverted triangle)

Ⓙ (hexagon)

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

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

● (square)

Ⓖ (rectangle)

Ⓗ (triangle)

Ⓙ (trapezoid)

9 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.
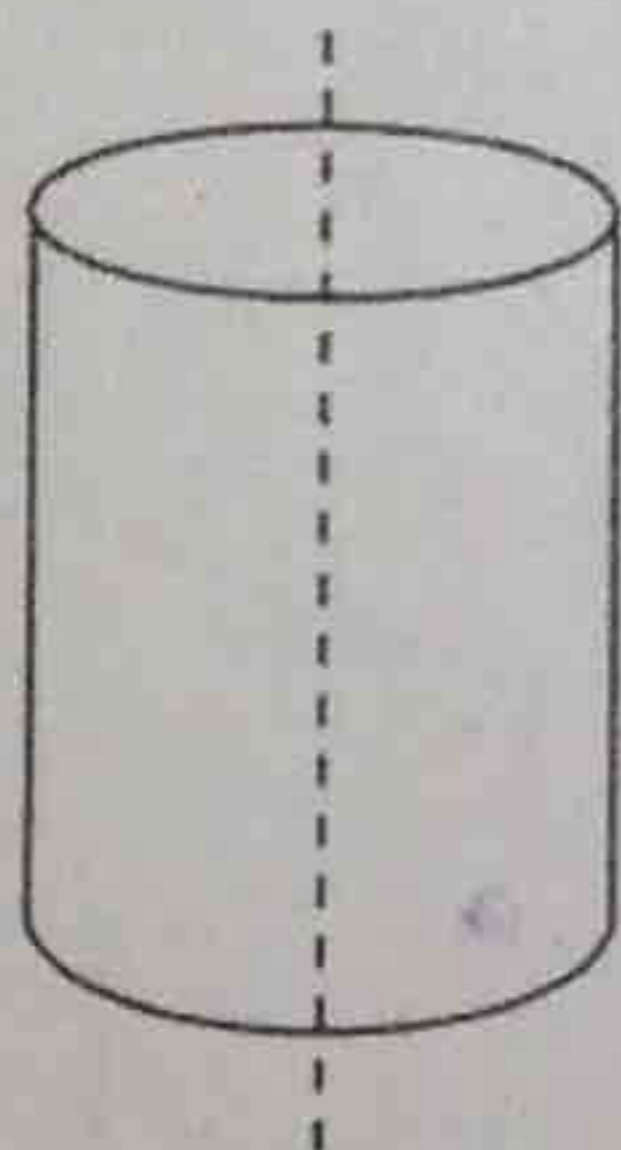
5 inches

3 inches

$3^2 + 5^2 = x^2$

$9 + 25 = x^2$

$34 = x^2$

$x = 5.8$

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

Ⓐ 19.3 square inches

Ⓑ 12 square inches

$3 \times 5.8 = 17.4$

Ⓒ 15.8 square inches

● 17.5 square inches

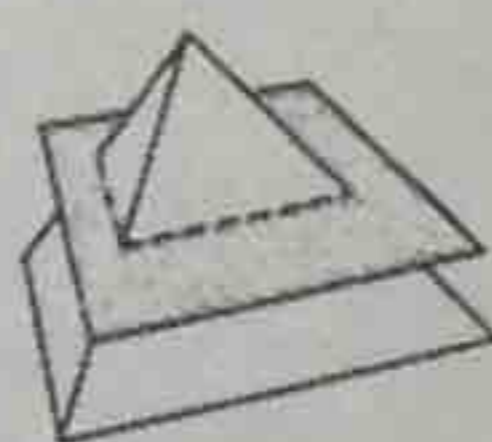
11 A cross-section is cut from the cylinder below.

What is the shape of the cross-section?

Ⓐ Rectangle

Ⓑ Circle

Ⓒ Semicircle

Ⓓ Oval

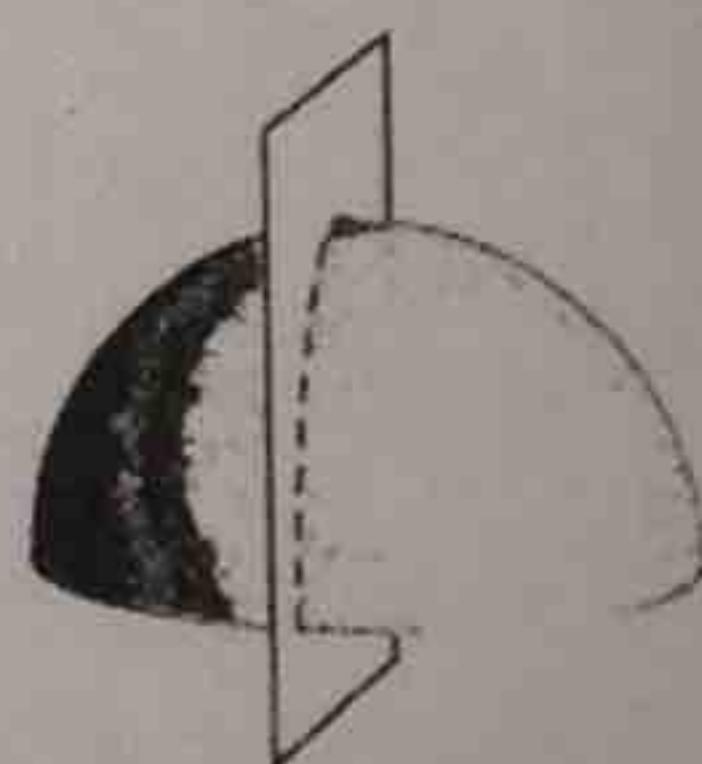
17 A triangular pyramid is cut along the shaded plane shown below.

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

Ⓐ

Ⓑ

Ⓒ

●

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18 A hemisphere is cut along the plane shown below.

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

Ⓕ

Ⓗ

Ⓖ

Ⓙ