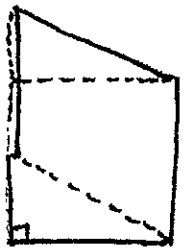
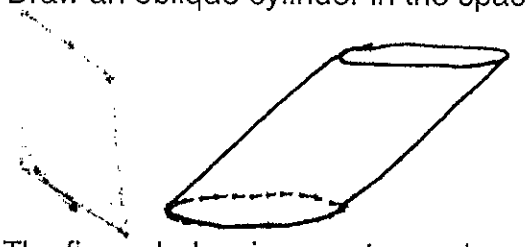
Unit H Exam Review

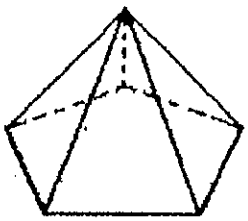
1. Draw a right triangular prism in the space below.



2. Draw an oblique cylinder in the space below.



3. The figure below is a pentagonal pyramid.



a. How many lateral faces does it have?

5

b. What is the shape of the lateral faces?

isosceles triangles

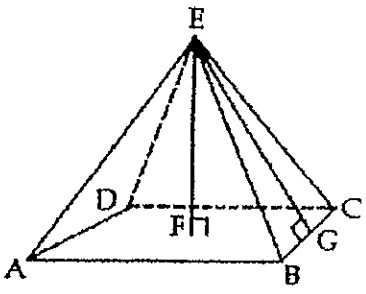
c. How many bases does it have?

1

d. How many edges does it have?

10

4. In the right square pyramid below,



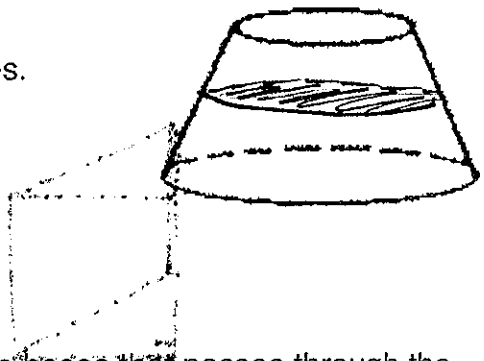
a. the length of which segment is the **slant height**?

$\overline{EG}$

b. the length of which segment is the **height**?

$\overline{EF}$

5. Use the truncated cone below.

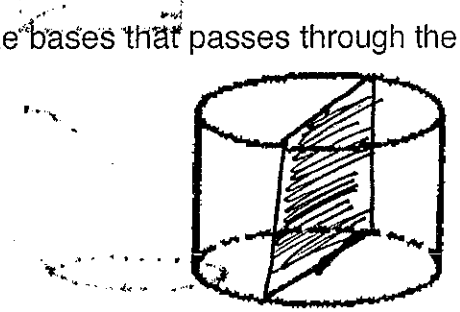


a. Sketch a plane section parallel to the bases.

b. Name the shape of the section you drew.

Circle

6. Use the right cylinder below.

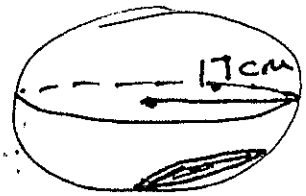


a. Sketch a plane section perpendicular to the bases that passes through the diameter of each base.

b. Name the shape of the section you drew.

Rectangle

7. Draw a sphere with radius 1.7cm. Sketch a small circle of the sphere.

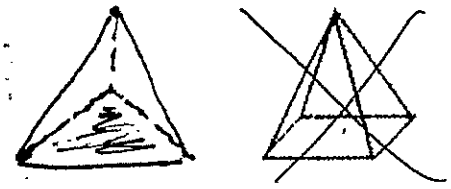


8. As precisely as possible, name the shape of any plane section not parallel to nor intersecting the base of a right cylinder.

Ellipse

9. As precisely as possible, name the shape of any plane section parallel to the base of a regular triangle pyramid.

Regular Triangle



10. Consider the regular square pyramid below. If $AY = 25$ and $AX = 24$, what is the length of XY?

$a^2 + b^2 = c^2$

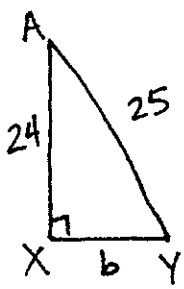
$24^2 + b^2 = 25^2$

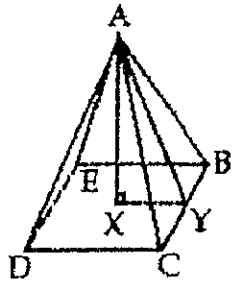
$576 + b^2 = 625$

$-576 \quad -576$

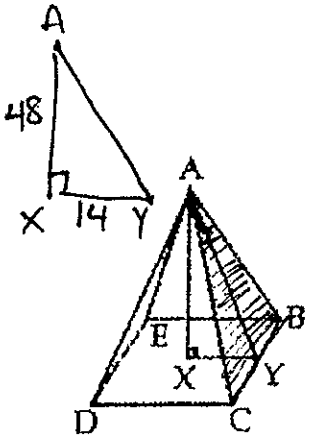
$\sqrt{b^2} = \sqrt{49}$

$b = 7$





11. For the regular square pyramid, $AX = 48$ and $XY = 14$.

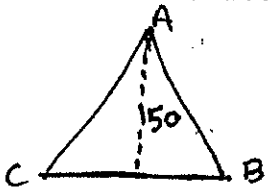


a. Find the slant height of the pyramid.

$48^2 + 14^2 = AY^2$

$\sqrt{2500} = \sqrt{AY^2} = 50$

b. Find the area of one lateral face.

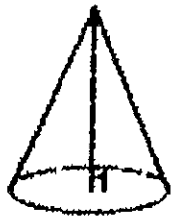


$A = \frac{1}{2} b \cdot h$

$A = \frac{1}{2} \cdot 28 \cdot 50$

$= 672$

12. Use the right cone pictured to the right.



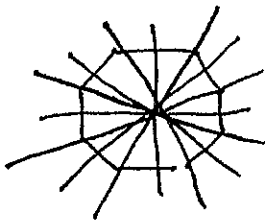
a. Does the figure have reflection symmetry?

Yes

b. How many symmetry planes does the figure have?

Infinite

13. The figure at the right is a regular octagonal prism.



a. Does the figure have reflection symmetry?

Yes

b. How many symmetry planes does the figure have?

9

14. Which 3D figure most resembles a math book? Be as specific as possible.

Right Rectangular Prism

15. Draw the net for a regular pentagonal pyramid.