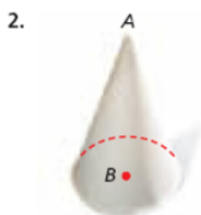


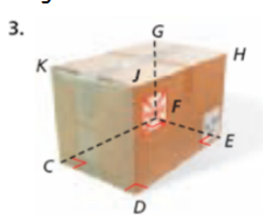
HW 9-5

1. Fill in the blank: A cylinder has two circular bases. (prism, cylinder or cone)

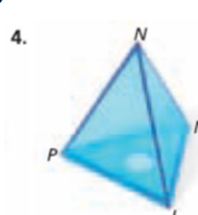
Classify each figure. Name the vertices, edges and bases.



2. cone; vertex: A
edges: none
base: $\odot B$



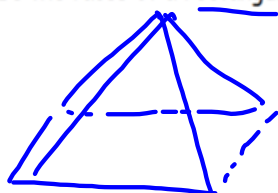
3. rectangular prism
vertices: C, D, E, F, G, H, J, K
bases: GHJK, CDEF
edges: \overline{GH} , \overline{GK} , \overline{HJ} , \overline{JK} , \overline{GF} ,
 \overline{HE} , \overline{JD} , \overline{KC} , \overline{FC} , \overline{CD} , \overline{DE} , \overline{EF}



triangular pyramid; vertices: L, M, N, P
edges: \overline{LM} , \overline{LN} , \overline{LP} , \overline{MN} , \overline{MP} , \overline{NP}
base: $\triangle LMP$

5. Faces of a cube: ~~4~~ ⁶ squares

6. Describe the faces of a rectangular pyramid: ⁴ triangles
1 rect base



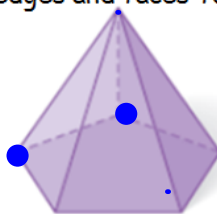
6. Describe the faces of a rectangular pyramid: ⁴ triangles, 1 rectangle

7. Explain why a cylinder is not a polyhedron: because the bases are circles, which are not polygons

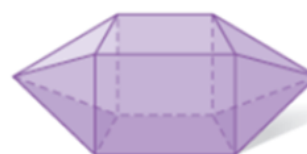
8. Name the number of vertices, edges and faces for each polyhedron.



Vertices: 6
Edges: 9
Faces: 5



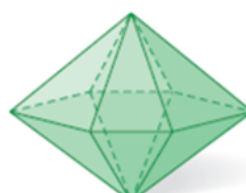
Vertices: 6
Edges: 10
Faces: 6



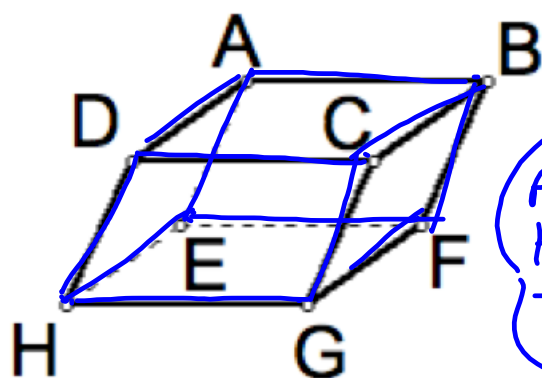
Vertices: 10
Edges: 20
Faces: 12



Vertices: 11
Edges: 20
Faces: 11



Vertices: 8
Edges: 18
Faces: 12



Name the vertices:

A, B, C, D, E, F, G, H

Name the faces:

ABCD top
HEFG botDCGH
GCBFAEFB
DAEH

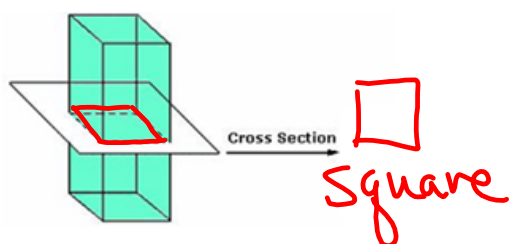
Name the bases:



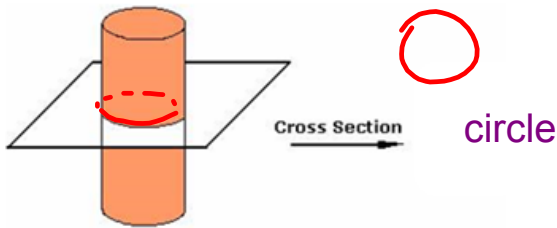
Name the edges:

Oblique
prism

Day 6: Cross Sections.

A cross section is the intersection of a three-dimensional figure and a plane.

Square

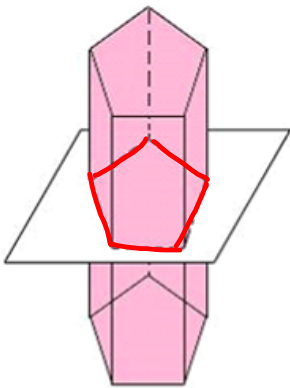


circle

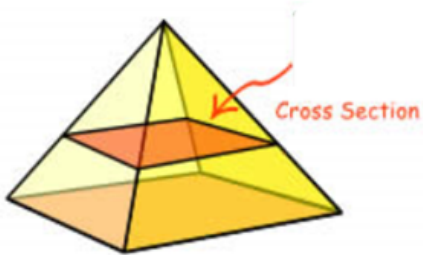
cylinder



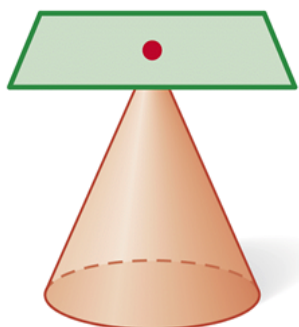
Pentagonal prism:
The cross section is a pentagon.



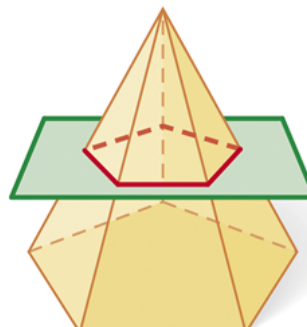
Pyramid:
The cross section is a rectangle.



The cross section is a point.



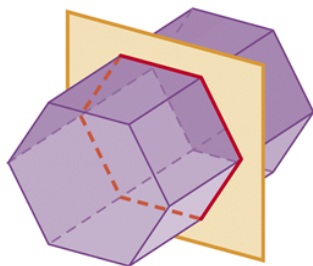
The cross section is a pentagon



20

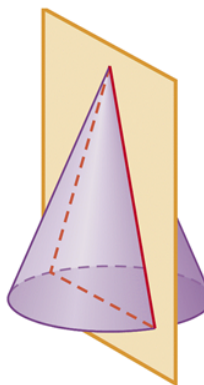
Pentagonal Pyr.

The cross section is a hexagon.



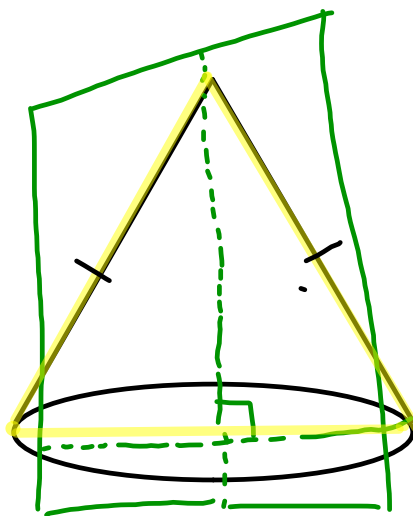
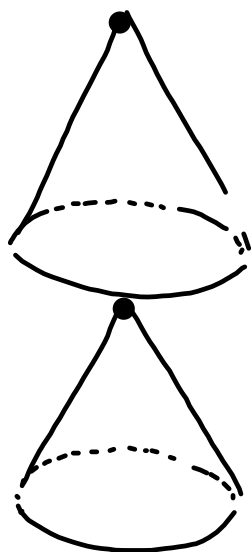
hexagonal
prism

The cross section is a triangle.



Describe the cross section in the following situations:

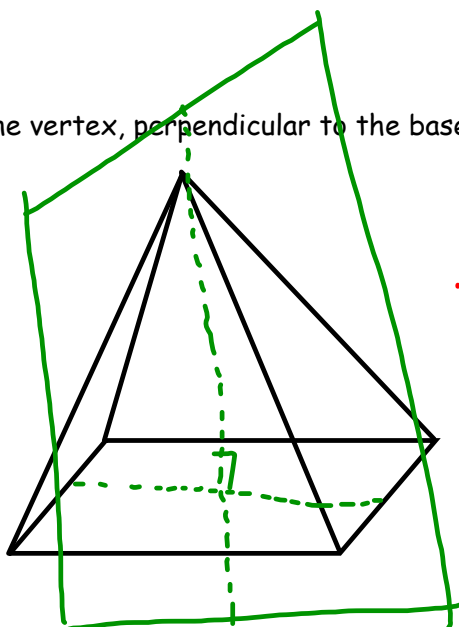
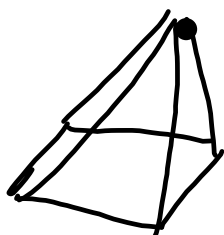
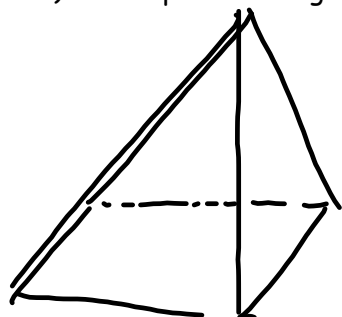
- 1) Cut a plane through the vertex, perpendicular to the base of a right circular cone.



isosceles
 \triangle

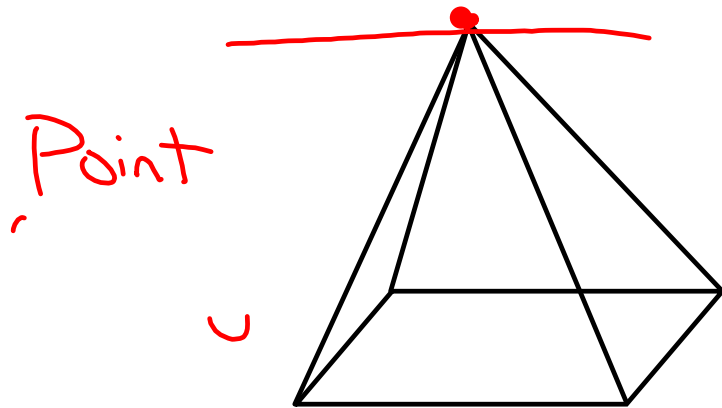


- 2) Cut a plane through the vertex, perpendicular to the base of a rectangular pyramid.

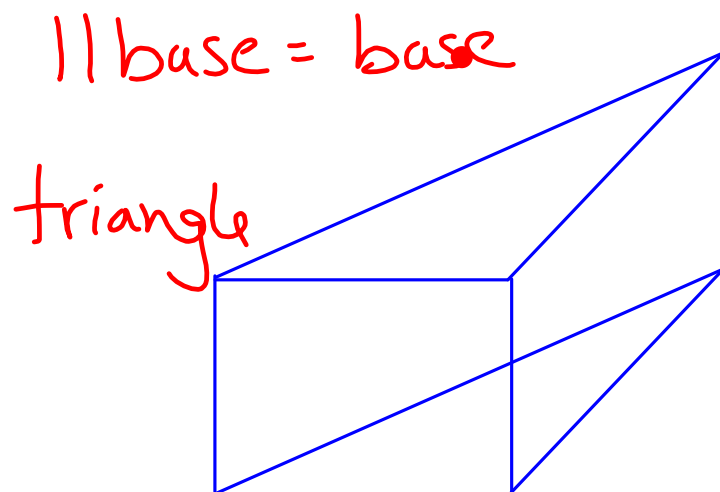


isosceles
 \triangle

- 3) Cut a plane through the vertex, parallel to the base of a rectangular pyramid.

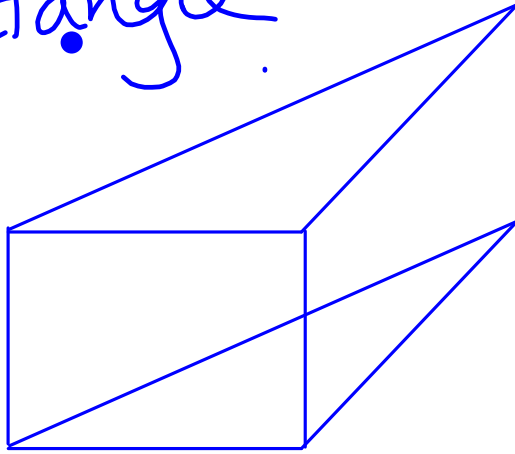


- 4) Cut a plane parallel to the base of a triangular prism

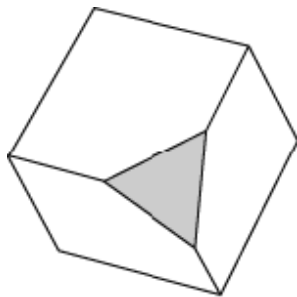


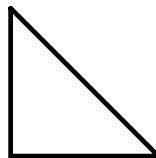
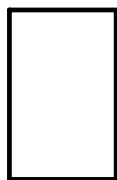
5) Cut a plane parallel to a face of a triangular prism.

rectangle.



Can you take a cross section
from a cube that is a triangle?





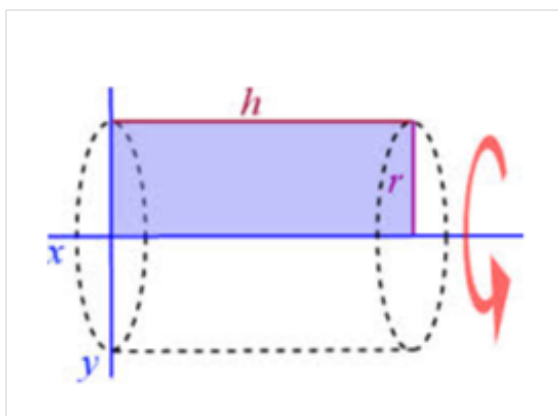
Solids created by revolving 2-D objects around an axis:

- 1) If a rectangle (base " h " and height " r ") is revolved around its base, a 3-D solid is formed.

Name that solid: cylinder

What is the radius? r

What is the height? h

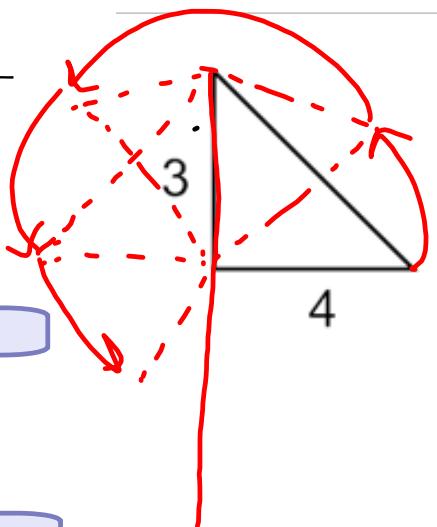
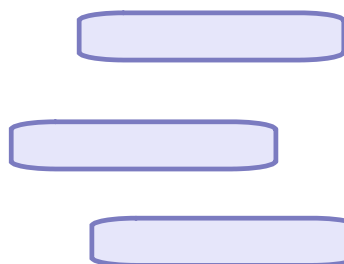


2) A Triangle with base 3 in and height 4 in is revolved around the 3 in leg. Draw the 3-D solid below.

Name that solid: cone

What is the radius? 4

What is the height? 3

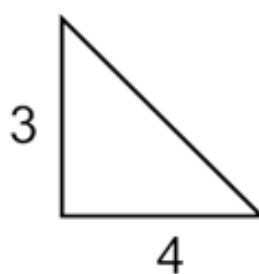
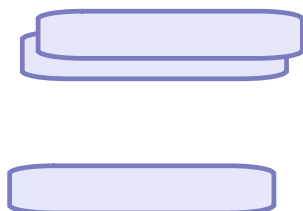


3) The same triangle is revolved around the 4 in leg. Draw the 3-D solid below:

Name that solid: cone

What is the radius? 3

What is the height? 4

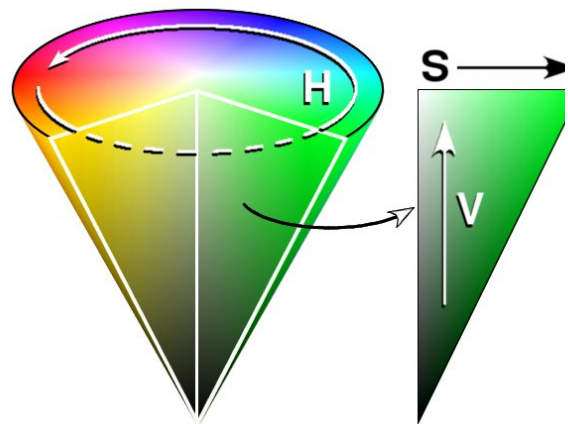
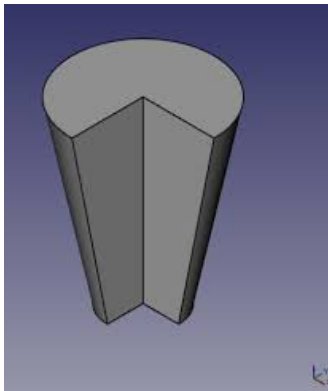


- 4) A 4 in x 6 in rectangle is revolved 180° around the 6 in side. Draw the resulting 3-D solid below:

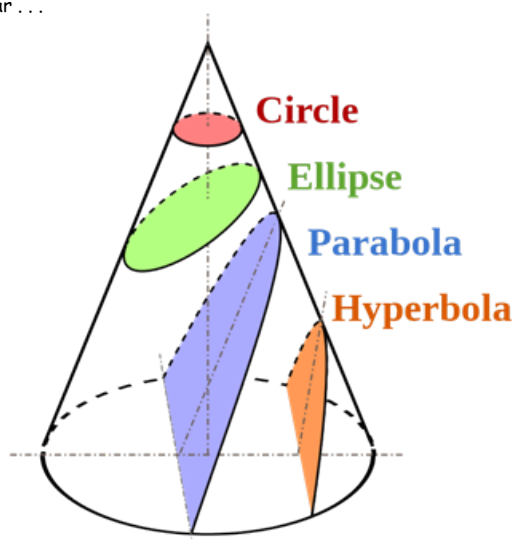
How would you describe the solid?

- 5) A triangle with a 1 in base and a 6 in height is revolved 270° around the 1 in base. Draw the resulting solid below:

How would you describe the solid?



Next year . . .



HW 9-6

HW Packet 9-6

 HW 9-6

HW 9-6

1. For each shape, describe (in a picture or in words) a cross section taken
- parallel to the base
 - perpendicular to the base



a)
b)



a)
b)

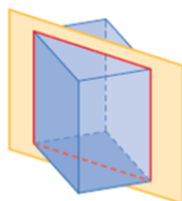


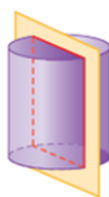
a)
b)

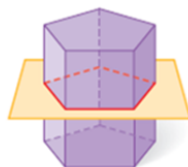


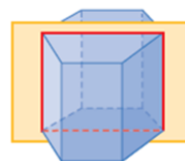
a)
b)

2. Describe each cross-section.









3. Which shape best represents a hexagonal prism when viewed from the top?

(F)



(H)



(G)



(J)



- Describe the cross section obtained by cutting a plane through the diameter of the base and perpendicular to the base of a right cylinder. _____
- A 2×10 rectangle is revolved around the side of length 2. Draw the resulting solid.
- A right triangle with leg lengths 3 and 11 is revolved around the side of length 11. Draw the resulting solid.