

Week 5 Thursday 19 September
Chapter Ten: 3D Geometry
Topic: 10.1 The Geometry of 3D Solids
IB Syllabus: 5.4 Geometry of three-dimensional solids
Lesson Obj: Students will identify key features of prisms and pyramids: vertex, edge, face, cross section, base
 Students will sketch right prisms given a cross section.
 Students will sketch pyramids given a base.
 Students will sketch nets of right prisms and pyramids

Review and Intro:

0. Vocab on board: vertex, edge, face, cross section, base
1. Students in groups of 4. Give each bag of solids. Sort into two groupings.
2. Discuss groupings: prisms and pyramids

Core Lesson:

3. Explore triangular prism together using http://www.learner.org/interactives/geometry/3d_prisms.html
 - sketch
 - cross section = parallel to base
 - faces
 - vertices
 - edges
 - net
4. Exploring prisms with http://www.learner.org/interactives/geometry/3d_prisms.html
5. Exploring pyramids with http://www.learner.org/interactives/geometry/3d_pyramids.html

Check for Understanding:

6. Check student worksheets
7. QUIZ Monday on 10.1

Assignment: Students will complete 425:1-2 all


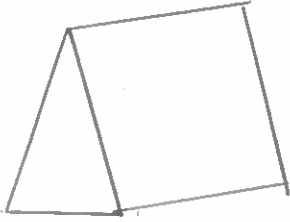


IB Math Studies Year 2

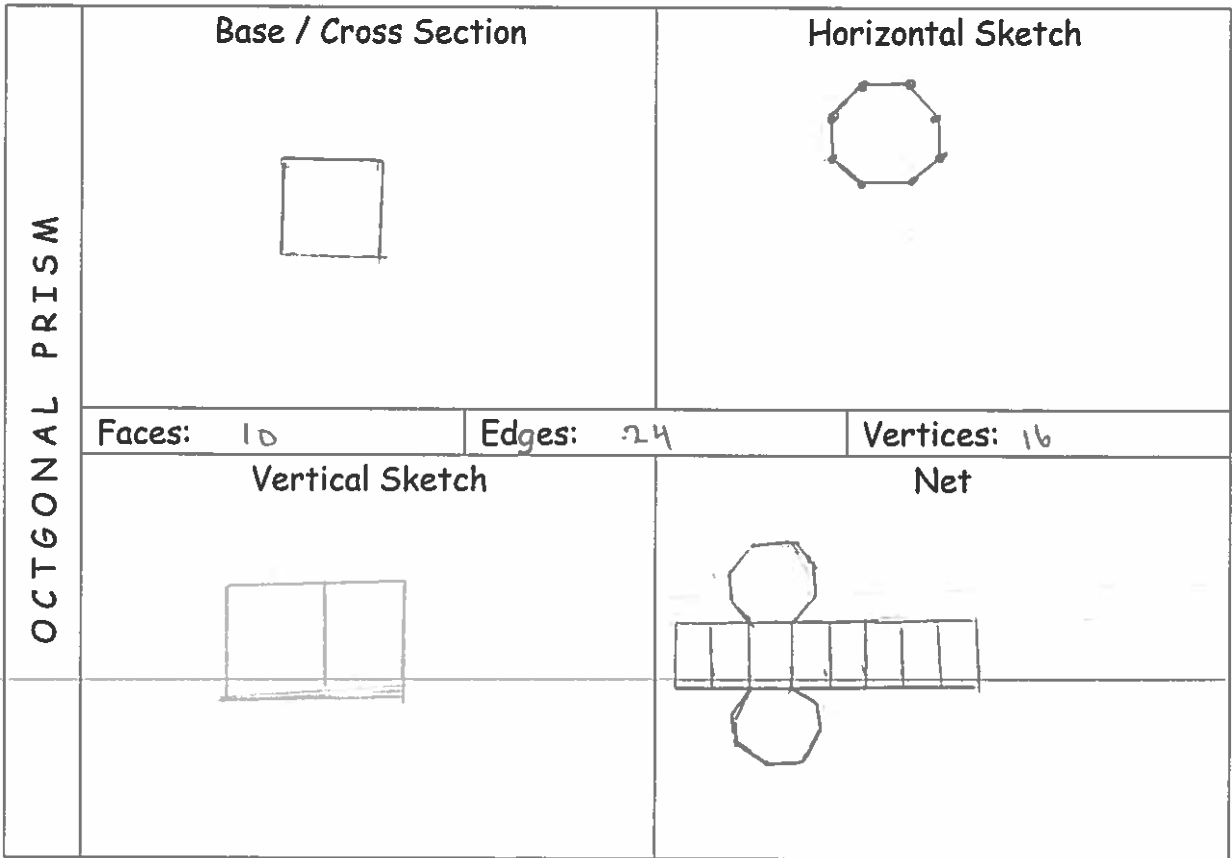
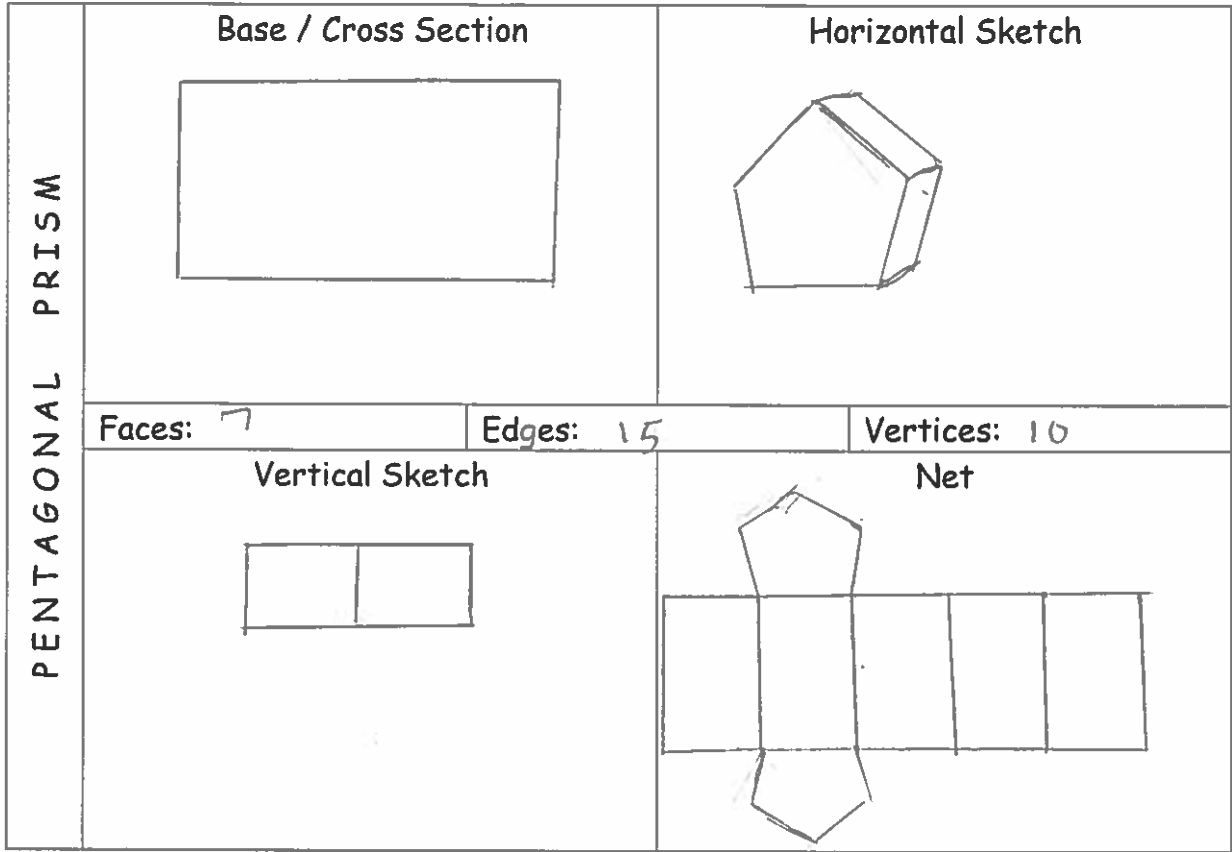
10.1 The Geometry of 3D Solids

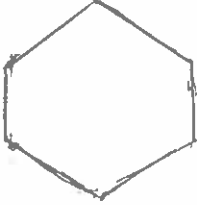
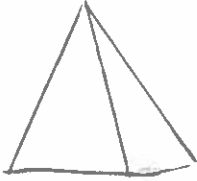
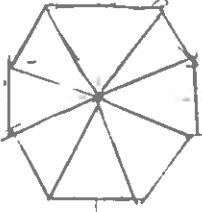
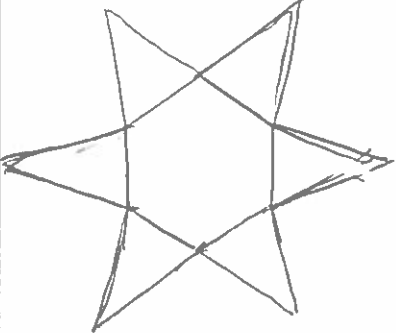
Key academic vocabulary:

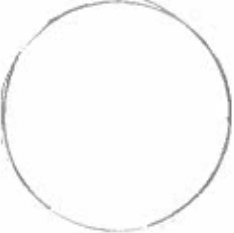

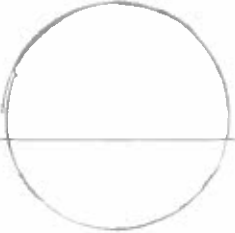
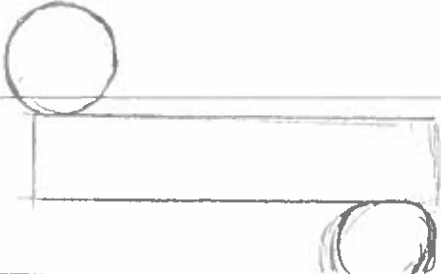
- base
The face of a polygon which is \perp to height
- cross section
- face
- edge
- vertex
- net

Explore the triangular prism at http://www.learner.org/interactives/geometry/3d_prisms.html

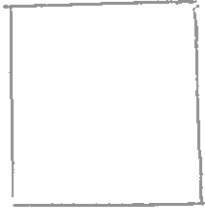

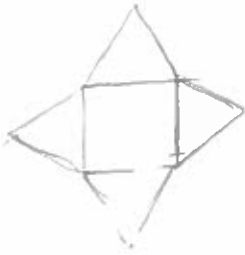
TRIANGULAR PRISM	Base / Cross Section		Horizontal Sketch	
				
	Faces: 5	Edges: 9	Vertices: 6	
	Vertical Sketch		Net	
				



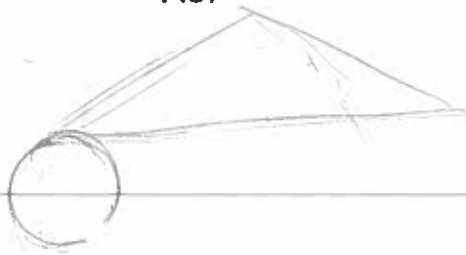


HEXAGONAL PRISM	Base / Cross Section		Horizontal Sketch	
				
	Faces: 7	Edges: 12	Vertices: 7	
	Vertical Sketch		Net	
				

CYLINDER	Base / Cross Section		Horizontal Sketch	
				
	Faces: 2	Edges: 0	Vertices: 0	
	Vertical Sketch		Net	
				

Explore the Rectangular Pyramid at http://www.learner.org/interactives/geometry/3d_pyramids.html

RECTANGULAR PYRAMID	Base / Cross Section		Sketch	
				
	Faces: 4 5	Edges: 8	Vertices: 5	
	Vertical Height: h $(\frac{1}{2} \cdot w)$ Slant Height:		Net 	
Label these in your sketch				

CONE	Base / Cross Section		Sketch	
				
	Faces:	Edges:	Vertices:	
	Vertical Height: Slant Height:		Net 	
Label these in your sketch				