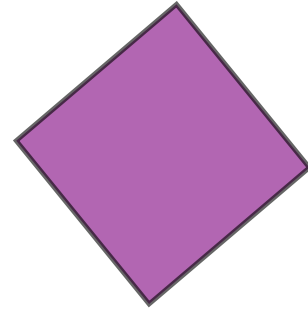


AGENDA - Unit 10.1**Solids**

Go over HW 9.7

- Notes 10.1

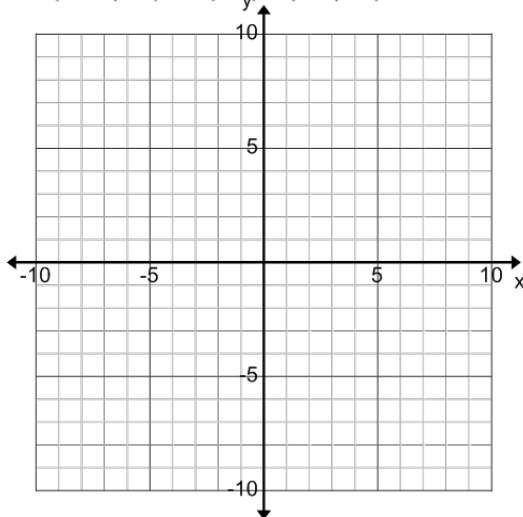
HW - 10.1 - Worksheet



- TEXT BOOK: p. 619 # 6-7, (no #8)13, 20,25

Multi-Step Draw and classify the polygon with the given vertices.
Find the perimeter and area of the polygon.

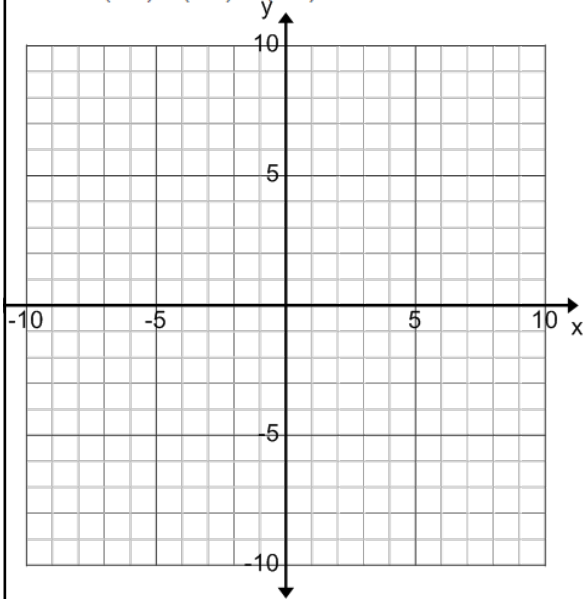
6. $A(-4, 2)$, $B(-2, 6)$, $C(6, 6)$, $D(8, 2)$



6. isosceles trapezoid;
 $P = (20 + 4\sqrt{5})$ units;
 $A = 40$ units²

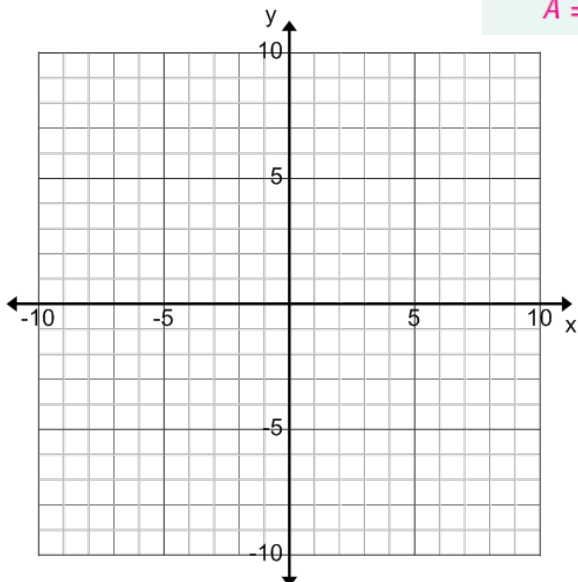
Find the area of each polygon with the given

7. $S(3, 8), T(8, 3), U(2, 1)$ $A = 20 \text{ units}^2$

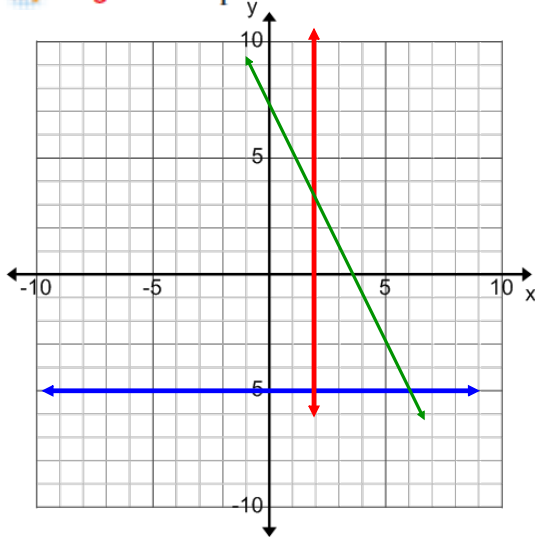


13. $L(7, 5), M(5, 0), N(3, 5), P(5, 10)$

13. rhombus; $P = 4\sqrt{29}$ units;
 $A = 20 \text{ units}^2$



Algebra Graph each set of lines to form a triangle. Find the area and perimeter.

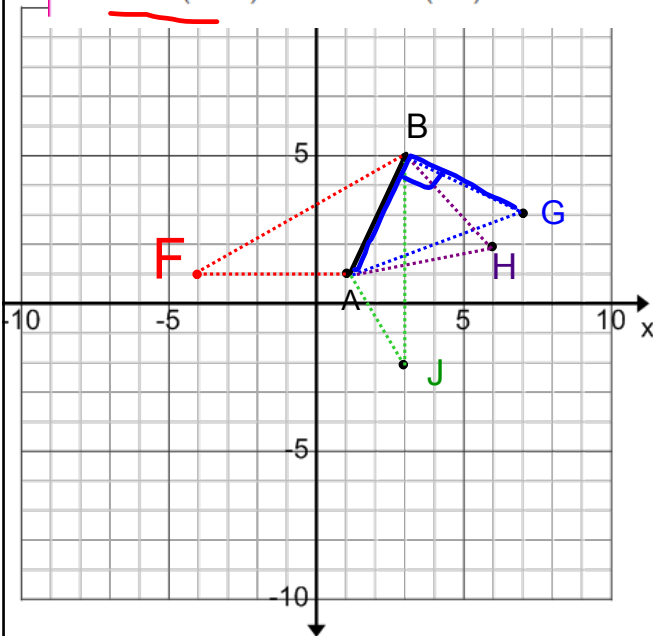


20. $y = -5$, $x = 2$, and $y = -2x + 7$

20. $P = 12 + 4\sqrt{5}$ units;
 $A = 16$ units²

25. $\triangle ABC$ with vertices $A(1, 1)$ and $B(3, 5)$ has an area of 10 units². Which is NOT a possible location of the third vertex?

- F $C(-4, 1)$ G $C(7, 3)$ H $C(6, 1)$ J $C(3, -3)$



$A = 1/2 bh$

Geometry LAB Name: _____ Section: _____ Date: _____

Unit 10 Day 1: Solid Geometry Introduction

Three-Dimensional Vocabulary

A Solid – A three dimensional closed spatial figure.

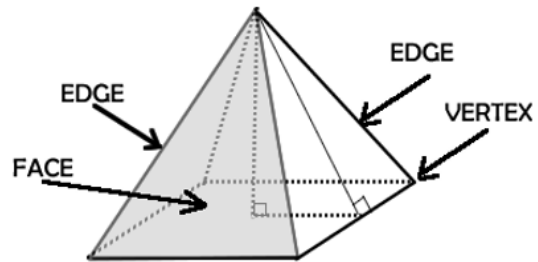
A Polyhedron – a geometric solid with polygons as faces that intersect at the edges.

A Face of a Polyhedron – One of the polygons that form the polyhedron.

An Edge – The intersection of two faces of a polyhedron.

A Vertex – The intersection of two or more edges.

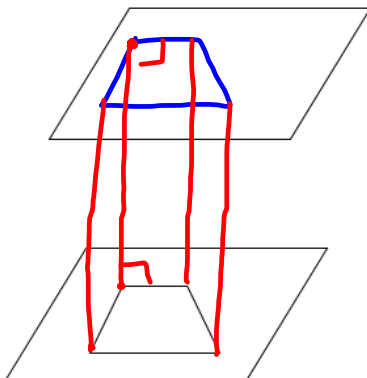
Altitude – The segment connecting the vertex perpendicular to the base



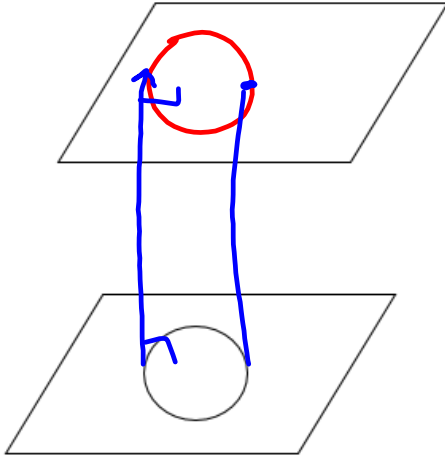
Creation of Solids

We can create polyhedrons & solids by **translating** a polygon or circle into a parallel plane. The translation vectors will determine whether the polyhedron is **right or oblique**.

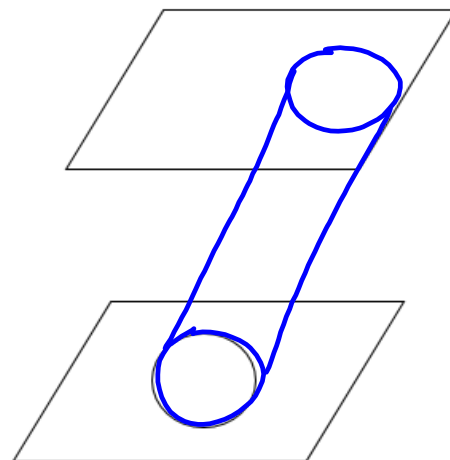
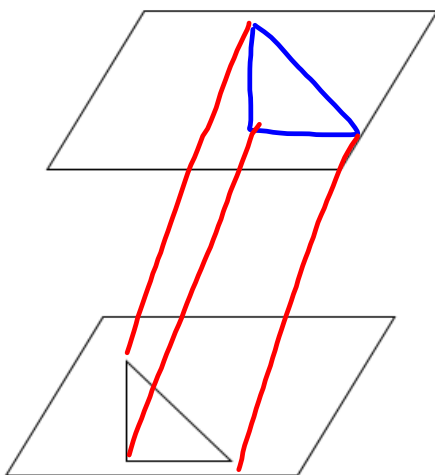
Map the polygon or circle onto the parallel plane such that the segments connecting the pre-image to the image are perpendicular to the planes.



Map the polygon or circle onto the parallel plane such that the segments connecting the pre-image to the image are perpendicular to the planes.

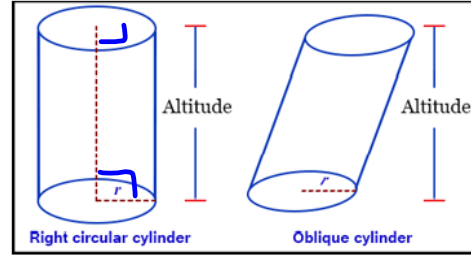


Map the polygon or circle onto the parallel plane such that the segments connecting the pre-image to the image are not perpendicular to the planes.

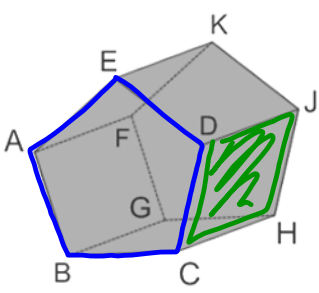


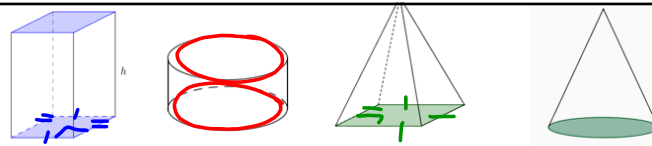
Additional Vocabulary:



Right vs. Oblique: The altitude of a **right** polyhedron is the segment that is perpendicular to the parallel planes containing the bases.



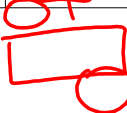
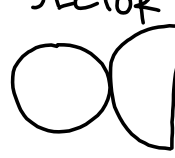
Vocabulary	Definition	Example
Base:	The face on the "top" and/or "bottom" of the solid.	PENTAGON ABCDE
Lateral Face:	Faces that are not the base.	□CDJH
Net:	is a 2-dimensional diagram of the surfaces of a solid that can be folded to form the 3-dimensional solid.	
Slice / Cross Section	The figure that results from the intersection of a plane with a solid (note: some sources say a cross section is specifically parallel to the base)	





Geometric Solid Classifications				
Properties	Prism	Cylinder	Pyramid	Cone
Shape of Base?	RECTANGLE <small>POLYGON AS ADJECTIVE</small>	CIRCLE	SQUARE	CIRCLE
Number of Bases	2	2	1	1
How named?	RECTANGULAR PRISM	CYLINDER	SQUARE PYRAMID	CONE
Shape of Lateral Faces			Δ'S	PART OF ○ SECTOR

Draw Net
(Put in LS #10)

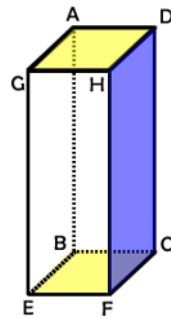



WORKSHEET 10-1 LAB Name _____ Due _____ Section _____

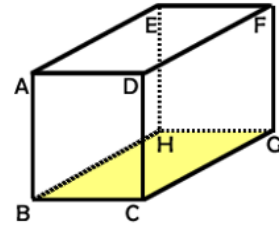
1. Match the following terms to the diagram.

Given the rectangular prism with face BCFE as one of its bases. Use each value ONLY ONCE.

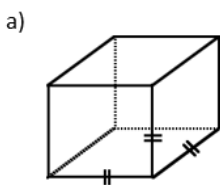
- | | |
|-----------------------|-----------------------|
| _____ 1. Edge | A. Rectangle ADHG |
| _____ 2. Lateral Face | B. \overline{HF} |
| _____ 3. Base | C. \overline{AD} |
| _____ 4. Vertex | D. Point B |
| _____ 5. Altitude | E. Parallelogram GDCE |
| _____ 6. Slice | F. Rectangle HDCF |



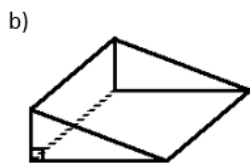
2. After looking at the rectangular prism to the right, a young lady in the class raises her hand and says, "Could I use rectangle ADCB as my base instead of rectangle BHGC?" How should the teacher respond?



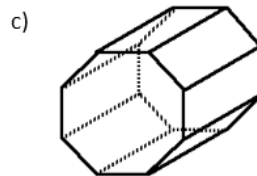
3. Properly name the following prisms or pyramids:



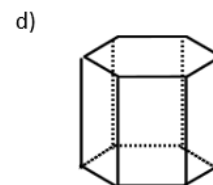
Name: _____



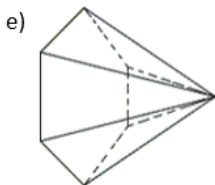
Name: _____



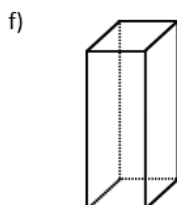
Name: _____



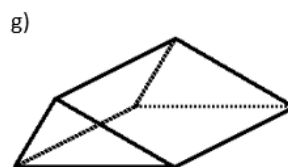
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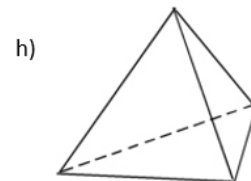
Name: _____



Name: _____

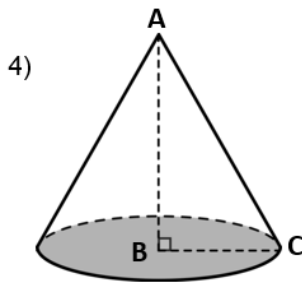


Name: _____



Name: _____

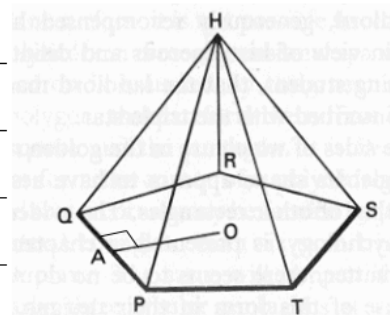
Classify each figure. Complete the questions in each table.



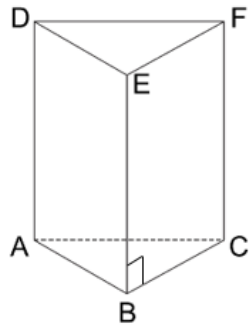
Name of Solid	
Number of Bases	
Altitude	
Right or Oblique?	
Formula to find the area of the base	
Is AC the same length as AB?	

5)

Name of Regular Right Polyhedron with base centered at O	
Altitude	
Relationship of \overline{HO} to \overline{OA}	
Apothem	
Formula to find the area of the base	



6)



Name of Polyhedron	
Shape of Lateral Faces	
Total Number of Faces	
Number of Edges	
Edge perpendicular to \overline{EF} intersecting at vertex E	
Translation vector from vertex B	
Edge skew to \overline{EF} (3 possible answers)	
Formula to find the area of the base	