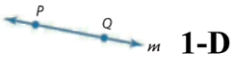
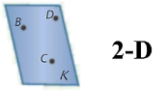
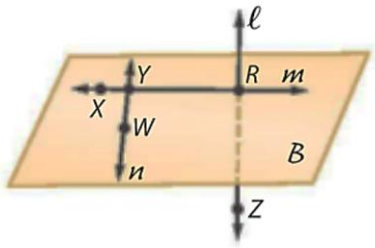
Honors 1 Name: _____

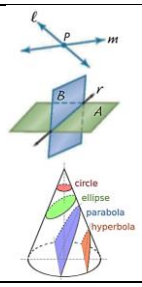
1.1/1.3 – Geometry Definitions and Distance & Midpoint Formulas

Point: a location that has no _____ or _____.	Example  Name:
Line: a straight one-dimensional figure having no thickness and extending infinitely in both directions. Between any two points there is exactly _____ line.	Example:  Name:
Plane: flat surface made up of at least _____ points (not on the same line) that extends infinitely in all directions.	Example  Name:
Collinear:	**Coplanar**:

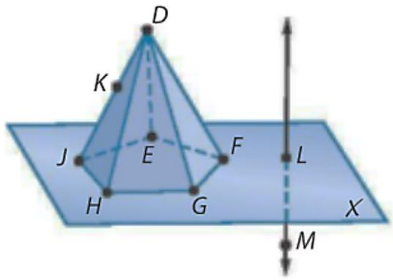
Example

a) Give two different names for a line containing point Z. b) Give two different names for the plane. c) Are W and Y collinear? d) Are W and R collinear? e) Are W and R coplanar? Are W and Z coplanar?	

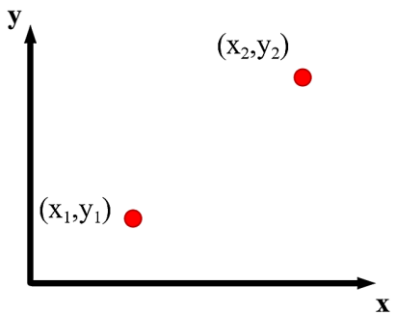
Intersection: the set of all points two or more figures have ____ _____.

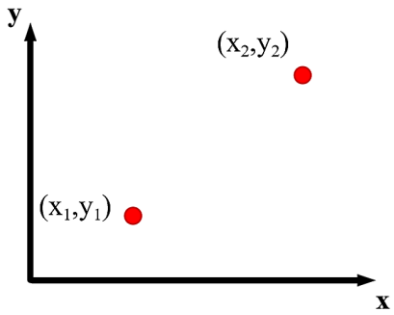
Two lines intersect at a _____ Two planes intersect at a _____ Two shapes intersect at a _____	

Example

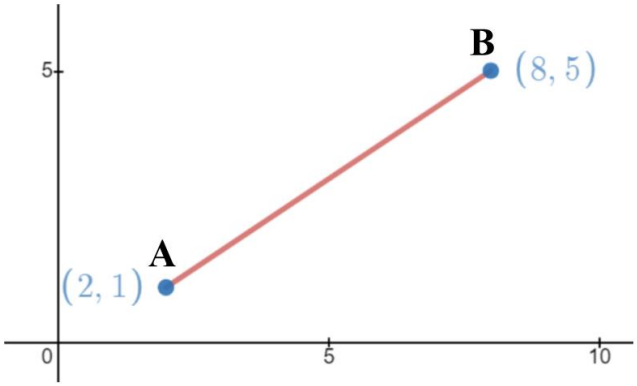
a) How many planes are in the picture? b) Where does plane *GDF* intersect plane *X*? c) Where does line $\overleftrightarrow{LM}$ intersect plane *X*? d) Where does line $\overleftrightarrow{LM}$ intersect line $\overleftrightarrow{JH}$?	

Distance: _____ of the straight-line segment connecting _____ points.

Distance Formula in One-Dimension	Distance Formula in Two-Dimensions
	

Midpoint Formula in One-Dimension	Midpoint Formula in Two-Dimensions
	

Example

a) Find the length of line segment $\overline{AB}$. b) Find the midpoint of line segment $\overline{AB}$.	

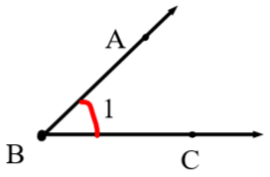
1.4/1.5 – Angle Measure and Relationships

Ray:

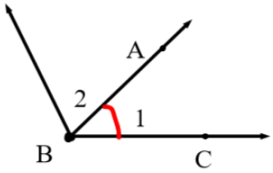
Angle:

There are 3 ways to name an angle: 1) 2) 3)

Example: Name all the angles for the red angle shown.

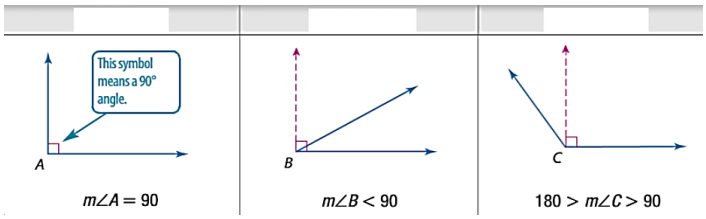


What if it looked like this? Which name would no longer work?



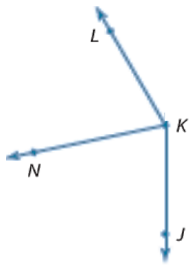
Degree: measurement for an angle. 1° is _____ the way around a circle.

Classifying an Angle: Angles are classified based on how many degrees (relative to 90°)



Angle Bisector:

Ex: $\overrightarrow{KN}$ $bisects$ $\angle JKL$. If $m\angle JKN = 8x - 13$ and $m\angle NKL = 6x + 11$, $find$ $m\angle JKN$.



Angle Pairs

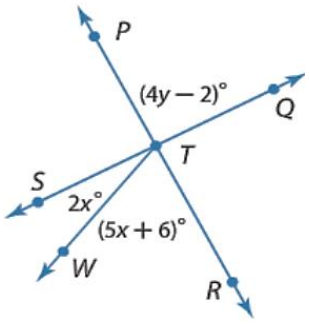
Adjacent Angles:	Linear Pair:	Vertical Angles:

Complementary Angles:

Supplementary Angles:

Ex: Two supplementary angles have a difference of 36°, what is each measurement?

Ex: Find x so that $\overleftrightarrow{PR}$ and $\overleftrightarrow{SQ}$ are perpendicular.



1.6 – Two-Dimensional Shapes

Polygon: a closed figure formed by a finite number of coplanar (on the same plane) segments called sides, where

-the sides that have common endpoint are noncollinear

-each side intersects exactly two other sides, but only at their endpoints

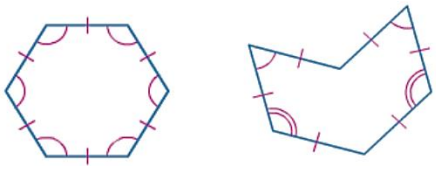
Polygons	Not Polygons

Concave Polygon:

Convex Polygon:

Regular Polygon:

Ex: Name each polygon by its number of sides. Then classify it as convex/concave and regular/irregular.

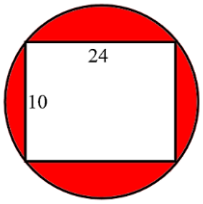


Perimeter:

Circumference:

Area:

What is the area of the red (shaded) if the circle has radius 13?

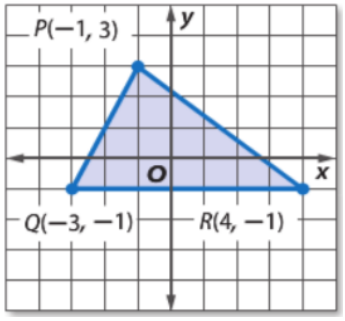


A gardener is looking to fence in an area of 36 sq feet. Would it be cheaper to use a circular or square shape?

Find the perimeter of the triangle shown below.

Method 1 for PQ

Method 2 for PR



1.7 – Three-Dimensional Shapes

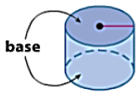
Polyhedron:

Prism:

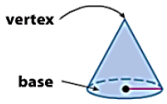
Pyramid:

NOT POLYHEDRONS: (_____, _____, _____)

A **cylinder** is a solid with congruent parallel circular bases connected by a curved surface.

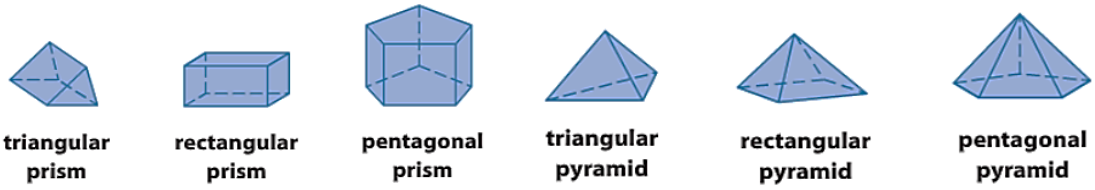


A **cone** is a solid with a circular base connected by a curved surface to a single vertex.



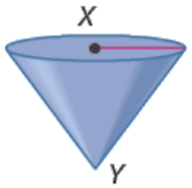
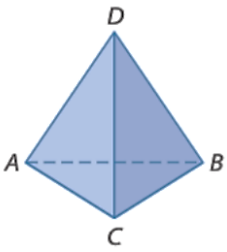
A **sphere** is a set of points in space that are the same distance from a given point. A sphere has no faces, edges, or vertices.

In naming a polyhedron, you name it by its _____ and the type of polyhedron (prism or pyramid).



triangular prism | **rectangular prism** | **pentagonal prism** | **triangular pyramid** | **rectangular pyramid** | **pentagonal pyramid**

Ex: State whether each is a polyhedron. If so, identify it, name the bases, faces, edges and vertices.

	 Base: Faces: Edges: Vertices:

Regular Polyhedron:

Surface Area:

Volume:

Ex: Find the volume and surface area of the Great Pyramid.