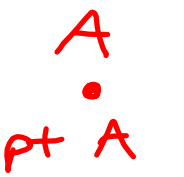
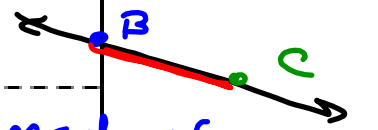
Lesson 1.1: Geometry Basics

Key Concepts:

Point: represents a location, has no dimensions



Collinear Points: points on a line



Line: extends without bound, 1 dimension, made of at least 2 pts

Line Segment: a piece of a line, can measure distance

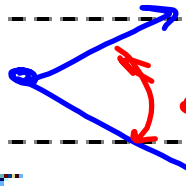
Ray: starts at an endpoint and goes on forever in one direction

Plane: 2 dimensions (length & width) that go on forever

3 points

Coplanar Points: points that lie in the same plane

Angle: 2 rays that share an endpoint



Bisector:

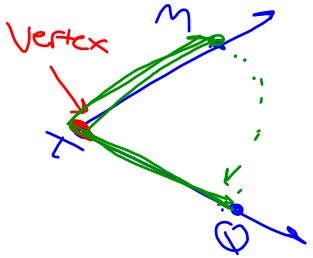
cut in half

line: $\overleftrightarrow{BC}$ or $\overleftrightarrow{CB}$

line segment: $\overline{BC}$ or $\overline{CB}$

Ray: $\overrightarrow{AB}$ ~~or $\overrightarrow{BA}$~~

Angle:



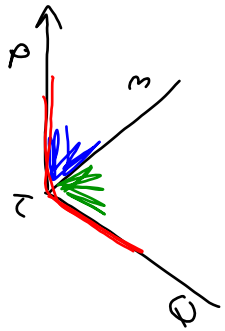
$\angle MTQ$

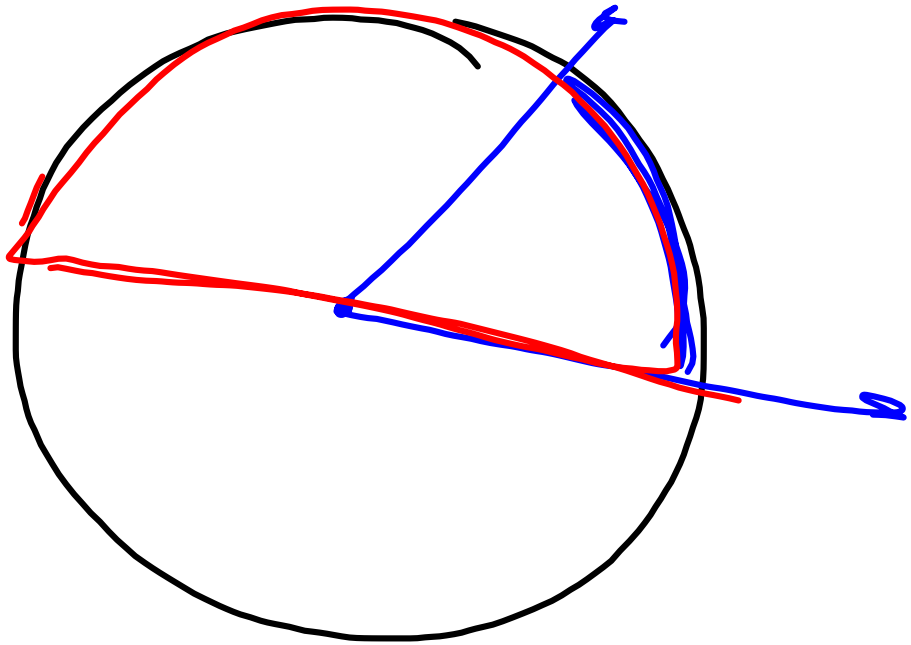
$\angle QTM$

or

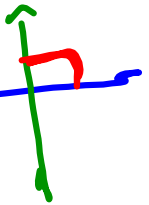
$* \angle T$

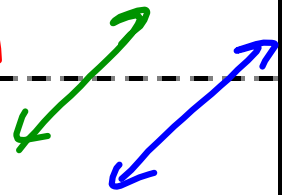
can not always use





Common Geometry Symbols:	
= equals $2=2$	⊥ Perpendicular
≅ congruent $\square \cong \square$	∥ Parallel
~ similar $\triangle \sim \triangle$	
≈ Approximate $\pi \approx 3.14$	
≠ Does not equal $3 \neq 4$	
± Plus or minus	





$$x = \pm 2$$

$x = 2$ or $x = -2$

Example 1 Identifying geometry terms

6

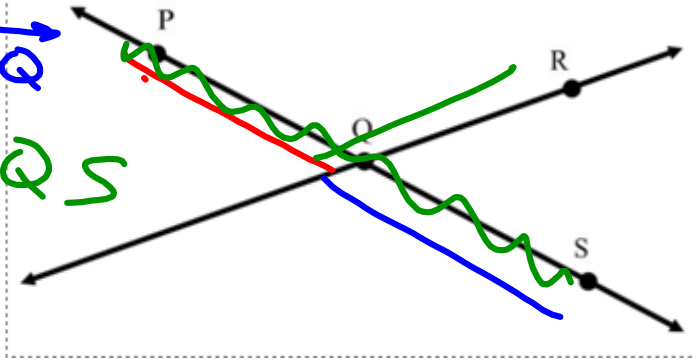
a. Name a line. $\overleftrightarrow{QR}$

b. Give another name for line QS. $\overleftrightarrow{SQ}$

c. Name a ray. $\overrightarrow{QR}$

d. Name 3 collinear points. pts P Q S

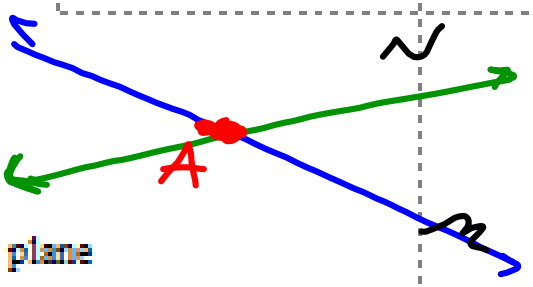
e. How many line segments can be made using points PQRS? 4



Intersections: two or more geometric figures that have one or more common point.

Example 2 Sketch the intersection and label your picture. Name where the objects intersect.

a. 2 lines.



$\overleftrightarrow{N}$ $\overleftrightarrow{M}$

intersect at pt A

b. A line and a plane

c. 2 planes.

Postulates and Theorems, What's the difference?

Postulate:

Theorem:

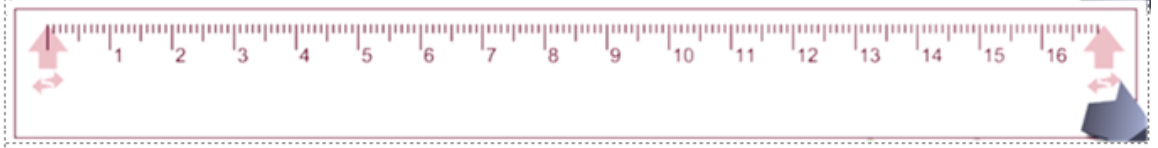
* Fill in postulate 1

Example 3

Mark the ruler as indicated.

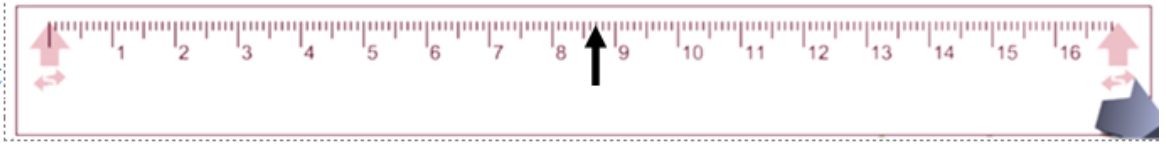
a. mark $2\frac{5}{8}$ inches

b. mark 3.7 centimeters.



c. what is the measurement of the arrow?

d. what is the measurement of the arrow?



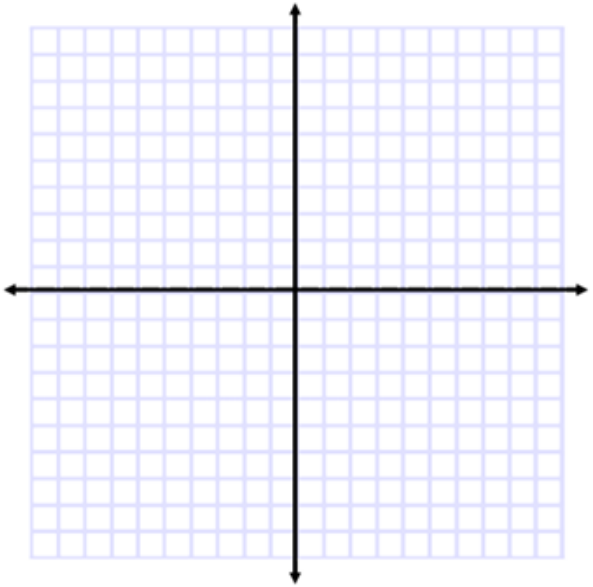
Coordinate Geometry:

Example 4

Using coordinates.

a. plot J(-2, -2), K(-3, 1), L(2,1), and M(-2, 3) and determine if there are any congruent line segments.

b. Plot A(2, 4), B(-3, -3), C(2, -6), and D(2, 1) and determine if there are any congruent line segments.



Definitions for next class:

Angle Bisector:

Segment Bisector:

Supplementary:

Complementary: