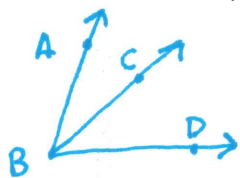


Lines and Planes

Two Parallel Lines Cut by a Transversal	Type of Angle	Angle Pair(s)	Relationship
	Corresponding	$\angle 1 \& \angle 5, \angle 2 \& \angle 6, \angle 3 \& \angle 7, \angle 4 \& \angle 8$	\cong
	Alternate Interior	$\angle 3 \& \angle 6, \angle 4 \& \angle 5$	\cong
	Alternate Exterior	$\angle 1 \& \angle 8, \angle 2 \& \angle 7$	\cong
	Same-side Interior	$\angle 3 \& \angle 5, \angle 4 \& \angle 6$	supplementary
	Same-side Exterior	$\angle 1 \& \angle 8, \angle 2 \& \angle 7$	supplementary
	Vertical Angles	$\angle 1 \& \angle 4, \angle 2 \& \angle 3, \angle 5 \& \angle 8, \angle 6 \& \angle 7$	* Note: lines not needed for these \angle s

Angle Addition Postulate



$$\angle ABC + \angle CBD = \angle ABD$$

Segment Addition Postulate



$$* AC - AB = BC$$

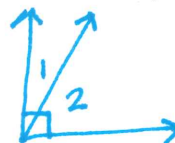
$$AB + BC = AC$$

Adjacent Supplementary Angles



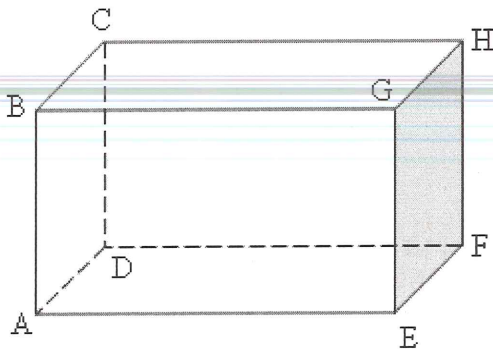
$$\angle 1 + \angle 2 = 180^\circ$$

Adjacent Complementary Angles



$$\angle 1 + \angle 2 = 90^\circ$$

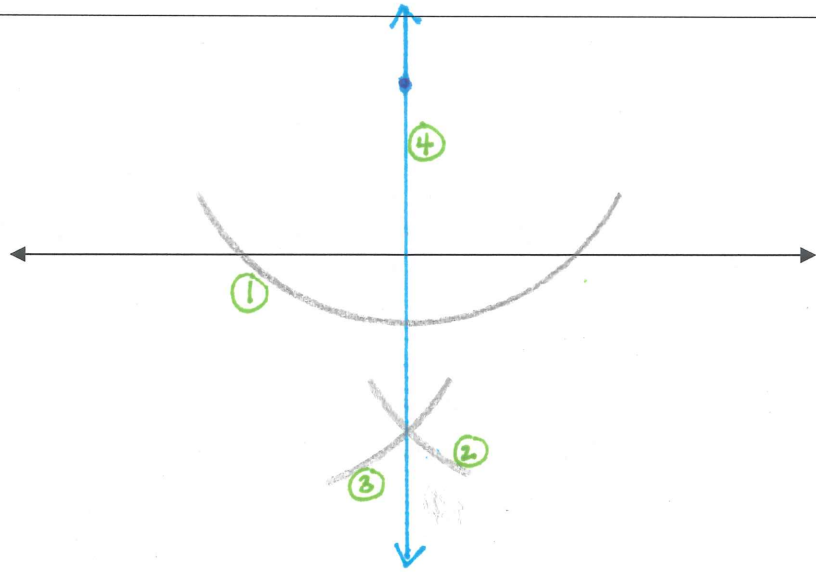
Undefined Terms			Important Terms	
Point A	Line \overleftrightarrow{AB}	Plane ABC	parallel = never intersect (coplanar) \parallel	$\overline{BG} \parallel \overline{CH}$
			perpendicular = 90° angles (coplanar) \perp	$\overline{AB} \perp \overline{BG}$
			skew = never intersect (non-coplanar)	$\overleftrightarrow{AB} \& \overleftrightarrow{DF}$
			collinear = points on the same line	
			coplanar = points and lines on the same plane	



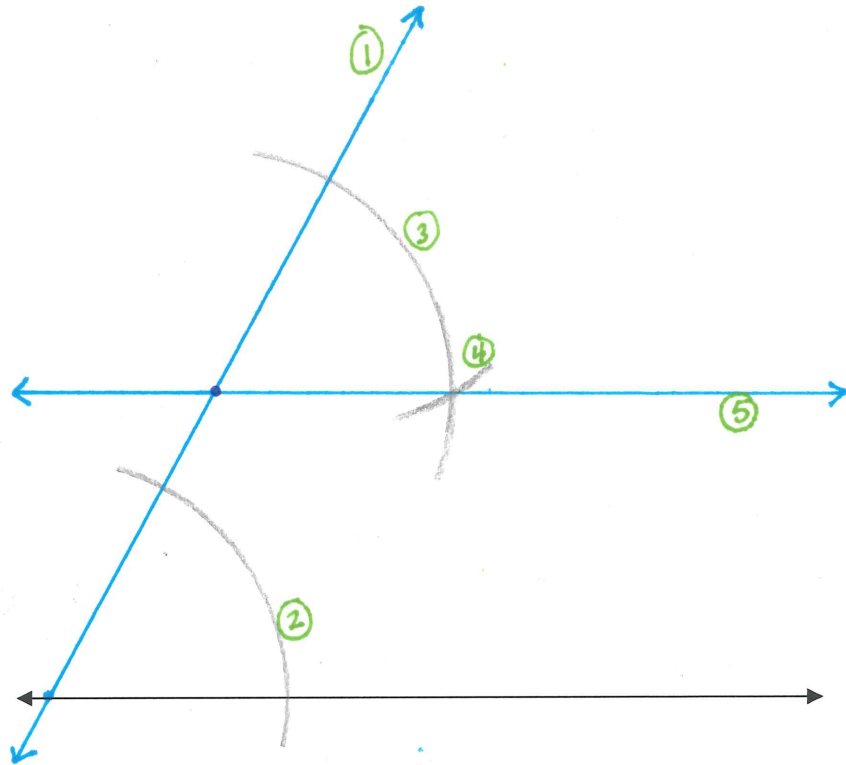
Constructions

Copy a Segment	
Copy an Angle	
Perpendicular Bisector	
Angle Bisector	
Perpendicular through a point on a line	

Perpendicular through
a point off a line



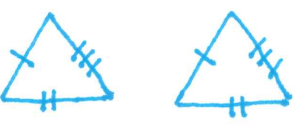
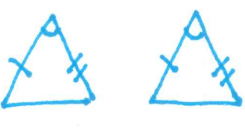
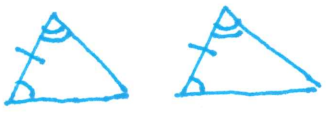
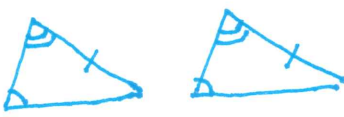

Parallel Line through a
point off a line



Equilateral Triangle



Congruent Triangles

POSTULATE/ THEOREM	PICTURE	
SSS		**We NEVER use <u>SSA</u> or <u>ASS</u>. (No bad words in math!)**
SAS		
ASA		If we know two triangles are congruent, then we can prove all of their corresponding parts are congruent. For short, we use <u>CPCTC</u> . (<u>C</u> orresponding <u>P</u> arts of <u>C</u> ongruent <u>T</u> riangles are <u>C</u> ongruent)
AAS		
HL	 * RIGHT TRIANGLES ONLY	

Area, Surface Area, and Volume

Provided Formulas	Formulas we need to know!
Volume Cylinder = $Bh = \pi r^2 h$	Area Circle = πr^2
Volume Pyramid = $\frac{1}{3} Bh = \frac{1}{3} s^2 h$ or $\frac{1}{3} Lwh$	Circumference Circle = $2\pi r$ or πd
Volume Cone = $\frac{1}{3} Bh = \frac{1}{3} \pi r^2 h$	Area Rectangle = lw
Volume Sphere = $\frac{4}{3} \pi r^3$	Volume Rectangular Prism = lwh
Lateral Area Cylinder = $2\pi rh$	Surface Area Rectangular Prism = $2lw + 2lh + 2wh$
Lateral Area Cone = πrl	Surface Area Cylinder = $2\pi r^2 + 2\pi rh$
Surface Area Sphere = $4\pi r^2$	