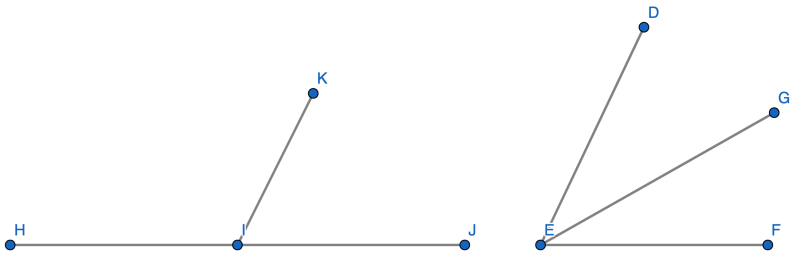
Geometry Cheat Sheet

Algebraic Properties

Transitive Property: If $x = y,\ y = z \Rightarrow x = z$
Reflexive Property: $x = x$
Distributive Property: $a(b + c) = ab + bc$

Axioms and Postulates

Angle Addition Postulate (AAP):If point G lies in the interior of ∠DEF, then:
m ∠DEG + m ∠GEF = m ∠DEF

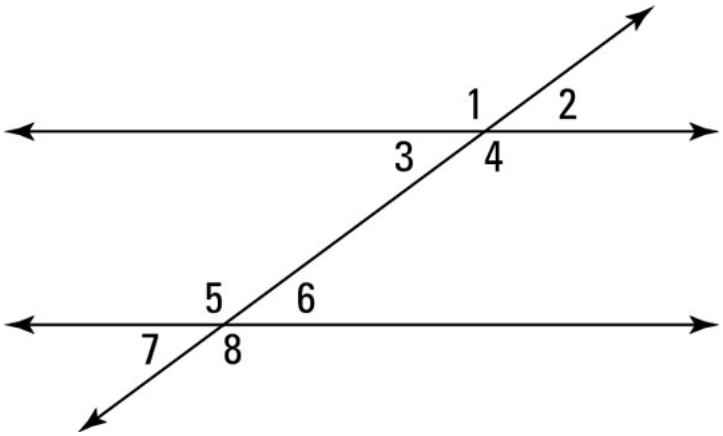


Segment Addition Postulate (SAP): If B is between A and C,
then AB + BC = AC

Symbols and Notation

Equals	$=$
Congruent	$\cong$
Angle A	$\angle A$
Measure of Angle A	$m\angle A$
Line Segment AB	$\overline{AB}$
Ray AB	$\overrightarrow{AB}$

Transversal Properties



Corresponding Angles: Angles in the same position on each line. e.g. 1 and 5, 2 and 6, 8 and 4, 3 and 7.

Same-Side Interior Angles: Angles that are both within the two parallel lines and are on the same side of the cutting line. e.g. 3 and 5, 4 and 6.

Alternate Interior Angles: Angles that are both within the two parallel lines but are diagonally across the cutting line. e.g. 3 and 6, 4 and 5.

Alternate Exterior Angles: Angles that are both outside of their respective Parallel line and are diagonally across the cutting line. e.g. 2 and 7, 1 and 8.

Vertical Angles: Pair of opposite angles made by two intersecting lines. e.g. 7 and 6, 5 and 8, 1 and 4, 2 and 3.