

Sheet#0231: Beginning Postulates, Properties, and Theorems

Segment Addition Postulate (#2)	$AB + BC = AC$
Angle Addition Postulate (#4)	$m\angle AOB + m\angle BOC = m\angle AOC$
Addition Property of Equality	If $a = b$ and $c = d$, then $a + c = b + d$
Subtraction Property of =	If $a = b$ and $c = d$, then $a - c = b - d$
Multiplication Property of =	If $a = b$ then $ca = cb$
Division Property of =	If $a = b$ then $a/c = b/c$ for $c \neq 0$
Substitution Property of =	If $a = b$ then a or b may be substituted for the other in any equation.
Reflexive Property of Equality	$a = a$
Symmetry Property of =	If $a = b$, then $b = a$
Transitive Property of =	If $a = b$ and $b = c$ then $a = c$
Reflexive Property of Congruence	$\overline{AB} \cong \overline{AB}$ (and likewise for angles)
Symmetric Property of \cong	If $\overline{AB} \cong \overline{CD}$ then $\overline{CD} \cong \overline{AB}$
Transitive Property of \cong	If $\overline{AB} \cong \overline{CD}$ and $\overline{CD} \cong \overline{EF}$ then $\overline{AB} \cong \overline{EF}$
Midpoint Theorem (2-1)	If M is the midpoint of \overline{AB} then $AM = \frac{1}{2} AB$ and $MB = \frac{1}{2} AB$
Angle Bisector Theorem (2-2)	If \overline{BX} is the bisector of $\angle ABC$ then $m\angle ABX = \frac{1}{2}m\angle ABC$ and $m\angle XBC = \frac{1}{2}m\angle ABC$