9-24-13

5th Geometry

If an angle is 90°, then it is a right angle.

If it is a right angle, then it is 90°.

An angle is a right angle if and only if the angle is 90°

$a \leftrightarrow b$

iff

Today is Properties

$A = A$

$\overline{AN} = \overline{AN}$ Reflexive

$AB = AB$

If $AB = CD$, then $CD = AB$

If $2+2=4$, then $4=2+2$ Symmetric

If $AB = CD$ and $CD = XY$, Transitive

then $AB = XY$

If $AB + CD = XY$ and $CD = 4$, then Substitution

$AB + 4 = XY$

If $AX + BY = 10$, Subtraction

$-BY \quad -BY$

then $AX = 10 - BY$

If $AN - BC = NY - BC$, Addition

$+BC \quad +BC$

then $AN = NY$

If $\frac{2 \cdot AB}{2} = \frac{8}{2}$, then Division

$AB = 4$.

If $5 \cdot \frac{CN}{5} = 5 \cdot 8$, then Multiplication

$CN = 40$.

If $AB = CD$, then

$AB + 6 = CD + 6$. Addition

If $AB + CD = NY$ and $CD = BX$, then

$AB + BX = NY$. Substitution

$CD = CD$ Reflexive

If $AB = 10$, then $10 = AB$. Symmetric

If $5 \cdot AB = BC$, then $AB = \frac{BC}{5}$ Division

If $AB = 6$ and $AB + BC = XY$, then

$6 + BC = XY$. Substitution

If $CN = BY$ and $BY = 4$, then $CN = 4$. Transitive

If $AB = 10 \cdot CD$, then $\frac{AB}{10} = CD$. Division

If $AB = XY$, then $AB + BC = XY + BC$. Addition

$\angle ABC = \angle ABC$ Reflexive

If $3 = CD$ and $CD = NY - 6$, then

$3 = NY - 6$. Transitive

$1^{st} = 2^{nd}$ $2^{nd} = 3^{rd}$ so $1^{st} = 3^{rd}$

9-24-13

6th Geo

Properties

$2 = 2$

$AB = AB$

$\angle AXN = \angle AXN$

Reflexive

If $2+2=4$, then $4=2+2$.

If $AB=CD$, then $CD = AB$.

Symmetric

If $A=6$ and $A+D=C$, then $6+D=C$.

Substitution

If $A=B$ and $B=C$, then $A=C$.

If $AB=BC$ and $BC=8$, then $AB=8$.

Transitive

If $AB + BC = 8$, then $AB = 8-BC$.

Subtraction

If $CN-6=BD$, then $CN = BD+6$.

Addition

If $\frac{2 \cdot AB}{2} = \frac{10}{2}$, then $AB = 5$.

Division

If $7 \cdot \frac{AB}{7} = 7CD$, then $AB = 7 \cdot CD$.

Multiplication

If $\angle ABC = \angle XYZ$, then $\angle ABC + \angle BND = \angle XYZ + \angle BND$. — Addition

$\angle ABC = \angle ABC$ — Reflexive

If $AB = NY$ and $NY = 6$, then $AB = 6$. — Transitive

If $2AB = CD$, then $AB = \frac{CD}{2}$. — Division

If $AN = BC$, then $BC = AN$. — Symmetric

If $AB - XY = CD - XY$, then $AB = CD$. — Addition

If $\angle 1 + \angle 2 = 90$ and $\angle 2 = \angle 5 + \angle 6$, then $\angle 1 + \angle 5 + \angle 6 = 90$. — Substitution

If $AN = CY$, then $AN - 6 = CY - 6$. — Subtraction

If $2 = AB$ and $AB + BC = XY$, then $2 + BC = XY$. — Substitution

If $-3 \cdot AB = CD$, then $AB = -\frac{CD}{3}$ — Division