

### Algebra Properties:

**Properties of Equality:** Let  $a$ ,  $b$ , and  $c$  be real numbers

Addition Property: If  $a = b$ , then

Subtraction Property: If  $a = b$ , then

Multiplication Property: If  $a = b$ , then

Division Property: If  $a = b$ , then

Reflexive Property: For any real number  $a$ ,

Symmetric Property: If  $a = b$ , then

Transitive Property: If  $a = b$  and  $b = c$ , then

Substitution Property: If  $a = b$ , then

### Geometry Properties:

**Properties of Congruence:** (same shape and same size)

Reflexive Property: Any geometric figure is congruent to itself

Symmetric Property: If one geometric figure is congruent to a second, then the second is congruent to the first.

Transitive Property: If one geometric figure is congruent to a second, and the second is congruent to a third, then the first object is congruent to the third object.