Table 4
The Properties of Equality

Here a, b, and c stand for arbitrary numbers in the rational, real, or complex number systems.

Reflexive Property of Equality	$a = a$
Symmetric Property of Equality	If $a = b$, then $b = a$.
Transitive Property of Equality	If $a = b$ and $b = c$, then $a = c$.
Addition Property of Equality	If $a = b$, then $a + c = b + c$.
Subtraction Property of Equality	If $a = b$, then $a - c = b - c$.
Multiplication Property of Equality	If $a = b$, then $a \bullet c = b \bullet c$.
Division Property of Equality	If $a = b$ and $c \neq 0$, then $a \div c = b \div c$.
Substitution Property of Equality	If $a = b$, then b may be substituted for a in any expression containing a.