## **ALGEBRAIC PROPERTIES CARD SORT**

Equation	A statement that two expressions are equal.	5x + 9 = 24
Inverse Operations	Two operations that undo each other.	Addition and Subtraction
Equivalent Equations	Equations that have the same solutions.	x + 2 = 7 and $2x + 1 = 11$
Addition Property of Equality	Adding the same number to each side of an equation produces an equivalent equation.  If a=b, then a + c = b + c.	x - 5 = 7 $(x - 5) + 5 = 7 + 5$ $x = 12$
Subtraction Property of Equality	Subtracting the same number from each side of an equation produces an equivalent equation.  If a=b, then a – c = b – c.	x + 4 = 10 $(x + 4) - 4 = 10 - 4$ $x = 6$
Multiplication Property of Equality	Multiplying each side of an equation by the same nonzero number produces an equivalent equation.  If $a=b$ , then $a \cdot c = b \cdot c$ .	$\frac{x}{5} = 7$ $\left(\frac{x}{5}\right) \cdot 5 = 7 \cdot 5$ $x = 35$
Division Property of Equality	Dividing each side of an equation by the same nonzero number produces an equivalent equation. If $a=b$ , then $a \div c = b \div c$ .	$6x = 24$ $\frac{6x}{6} = \frac{24}{6}$ $x = 4$