

Algebraic Properties

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| A. Distributive Property of Multiplication
Over Addition | G. Transitive Property of Equality |
| B. Associative Property of Multiplication | H. Symmetric Property of Equality |
| C. Associative Property of Addition | I. Reflexive Property of Equality |
| D. Commutative Property of Multiplication | J. Division Property of Equality |
| E. Commutative Property of Addition | K. Multiplication Property of Equality |
| F. Substitution Property of Equality | L. Subtraction Property of Equality |
| | M. Addition Property of Equality |
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Indicate which of the above properties is illustrated by the statements and equalities below.

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| _____ 1) If $8 + 2x = 12$, then $2(4+x) = 12$ | _____ 16) $a + 7 = a + 7$ |
| _____ 2) If $j = t$ and $t = 23$, then $j = 23$ | _____ 17) If $\frac{3}{4}x = 18$, then $x = 24$ |
| _____ 3) If $4x = 16$, then $4x - 3 = 13$ | _____ 18) If $(1)9 = 9$, then $9 = (1)9$ |
| _____ 4) If $3(y + 3) = 18$, then $(y + 3) = 6$ | _____ 19) $(c + 7) + 8 = c + (7 + 8)$ |
| _____ 5) If $7x - 4 = 9$, then $9 = 7x - 4$ | _____ 20) $(2 \cdot 3) \cdot 5 = 2 \cdot (3 \cdot 5)$ |
| _____ 6) If $6h + 3 = 50$, then $3 + 6h = 50$ | _____ 21) If $2y + 5 = -2$, then $2y = -7$ |
| _____ 7) If $3(4 \cdot y) = 47$, then $(3 \cdot 4)y = 47$ | _____ 22) $2x(6y) = 6y(2x)$ |
| _____ 8) $AB = AB$ | _____ 23) If $\frac{x}{2} = 20$, then $x = 40$ |
| _____ 9) $5 \cdot 7y = 7y \cdot 5$ | _____ 24) $3x + 5 = 3x + 5$ |
| _____ 10) $5(x - 1) = 5x - 5$ | _____ 25) If $7(3 + 4) = 7(7)$ and $7(7) = 49$,
then $7(3 + 4) = 49$ |
| _____ 11) If $x - 10 = 12$, then $x = 22$ | _____ 26) If $x + 1 = 10(2)$, then $10(2) = x + 1$ |
| _____ 12) If $x = 2x - 3$ and $x = y$, then
$y = 2y - 3$ | _____ 27) If $3x + y = 12$ and $y = 2x - 1$,
then $3x + 2x - 1 = 12$ |
| _____ 13) $3x + 1 = 1 + 3x$ | _____ 28) If $x + 24 = 12 - 2x$, then $3x + 24 = 12$ |
| _____ 14) $f + (g + h) = f + (g + h)$ | |
| _____ 15) If $3x = -21$, then $x = -7$ | |