

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 |

Indicate which of the above properties is illustrated by the statements and equalities below.

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| <u>A</u> 1) If $8 + 2x = 12$, then $2(4+x) = 12$ | <u>I</u> 16) $a + 7 = a + 7$ |
| <u>G</u> 2) If $j = t$ and $t = 23$, then $j = 23$ | <u>K or J</u> 17) If $\frac{3}{4}x = 18$, then $x = 24$ |
| <u>L</u> 3) If $4x = 16$, then $4x - 3 = 13$ | <u>H</u> 18) If $(1)9 = 9$, then $9 = (1)9$ |
| <u>J</u> 4) If $3(y + 3) = 18$, then $(y + 3) = 6$ | <u>C</u> 19) $(c + 7) + 8 = c + (7 + 8)$ |
| <u>H</u> 5) If $7x - 4 = 9$, then $9 = 7x - 4$ | <u>B</u> 20) $(2 \cdot 3) \cdot 5 = 2 \cdot (3 \cdot 5)$ |
| <u>E</u> 6) If $6h + 3 = 50$, then $3 + 6h = 50$ | <u>L</u> 21) If $2y + 5 = -2$, then $2y = -7$ |
| <u>B</u> 7) If $3(4 \cdot y) = 47$, then $(3 \cdot 4)y = 47$ | <u>D</u> 22) $2x(6y) = 6y(2x)$ |
| <u>I</u> 8) $AB = AB$ | <u>K</u> 23) If $\frac{x}{2} = 20$, then $x = 40$ |
| <u>D</u> 9) $5 \cdot 7y = 7y \cdot 5$ | <u>I</u> 24) $3x + 5 = 3x + 5$ |
| <u>A</u> 10) $5(x - 1) = 5x - 5$ | <u>G</u> 25) If $7(3 + 4) = 7(7)$ and $7(7) = 49$,
then $7(3 + 4) = 49$ |
| <u>M</u> 11) If $x - 10 = 12$, then $x = 22$ | <u>H</u> 26) If $x + 1 = 10(2)$, then $10(2) = x + 1$ |
| <u>F</u> 12) If $x = 2x - 3$ and $x = y$, then
$y = 2y - 3$ | <u>F</u> 27) If $3x + y = 12$ and $y = 2x - 1$,
then $3x + 2x - 1 = 12$ |
| <u>E</u> 13) $3x + 1 = 1 + 3x$ | <u>M</u> 28) If $x + 24 = 12 - 2x$, then $3x + 24 = 12$ |
| <u>I</u> 14) $f + (g + h) = f + (g + h)$ | |
| <u>J</u> 15) If $3x = -21$, then $x = -7$ | |