

Algebra I --- Properties

SPI 3102.1.3 Apply properties to evaluate expressions, simplify expressions, and justify solutions to problems.

Check for understanding 3102.1.9 Identify and use properties of the real numbers (including commutative, associative, distributive, inverse, identity element, closure, reflexive, symmetric, transitive, operation properties of equality).

Match the name of the property on the left with the matching expression on the right.

Write the letter of the correct answer in the blank to the left of the name of the property.

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|---|---|
| _____ 1. inverse property of addition | A. $\frac{a}{b} \cdot \frac{b}{a} = 1$ |
| _____ 2. transitive property | B. $a + b = b + a$ |
| _____ 3. associative property of multiplication | C. $a \cdot 1 = a$ |
| _____ 4. identity property of addition | D. $a = a$ |
| _____ 5. substitution property | E. if $a = b$ then $b = a$ |
| _____ 6. commutative property of multiplication | F. $(a \cdot b) \cdot c = a \cdot (b \cdot c)$ |
| _____ 7. multiplicative property of zero | G. if $a = b$ and $b = c$, then $a = c$ |
| _____ 8. associative property of addition | H. $a \cdot 0 = 0$ |
| _____ 9. inverse property of multiplication | I. $a + (-a) = 0$ |
| _____ 10. symmetric property | J. $a \cdot b = b \cdot a$ |
| _____ 11. identity property of multiplication | K. $a(b + c) = ab + ac$ |
| _____ 12. distributive property | L. $(a + b) + c = a + (b + c)$ |
| _____ 13. commutative property of addition | M. $a + 0 = a$ |
| _____ 14. reflexive property | N. if $a = b$, then a may be replaced by b in any expression |