

Match the property with its name.

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| ___ 1. Commutative Law of Addition | A. $(x + y) + z = x + (y + z)$ |
| ___ 2. Commutative Law of Multiplication | B. $x + y = y + x$ |
| ___ 3. Associative Law of Addition | C. $x(y - z) = xy - xz$ |
| ___ 4. Associative Law of Multiplication | D. $x + 0 = x$ |
| ___ 5. Identity Law of Addition | E. $x(y + z) = xy + xz$ |
| ___ 6. Identity Law of Multiplication | F. $x + -x = 0$ |
| ___ 7. Inverse Law of Addition | G. $xy = yx$ |
| ___ 8. Inverse Law of Multiplication | H. If $x \neq 0$, then $x(1/x) = 1$. |
| ___ 9. Distributive Law for Multiplication Over Addition | I. $(xy)z = x(yz)$ |
| ___ 10. Distributive Law for Multiplication Over Subtraction | J. $1x = x$ |

Find the value of each expression. If the value cannot be found, write 'undefined'.

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|-------------------------------|-------------------------------------|
| 11. $(62 + 45) + -45 =$ _____ | 12. $(50 \cdot 76) \cdot 2 =$ _____ |
| 13. $5^2 =$ _____ | 14. $2^5 =$ _____ |
| 15. $4^1 =$ _____ | 16. $1^4 =$ _____ |
| 17. $0 + 3 =$ _____ | 18. $3 + 0 =$ _____ |
| 19. $0 - 8 =$ _____ | 20. $8 - 0 =$ _____ |
| 21. $4 \div 0 =$ _____ | 22. $0 \div 4 =$ _____ |
| 23. $0 \cdot 7 =$ _____ | 24. $7 \cdot 0 =$ _____ |

Algebra I Worksheet #7 Unit 1 page 2

Perform the indicated operations. Express your answers in simplest form (no double signs).

25. $x + x + x + x + x + x =$ _____

26. $x \cdot x \cdot x \cdot x \cdot x \cdot x =$ _____

27. $x + x + y + y + y + y =$ _____

28. $x \cdot x \cdot y \cdot y \cdot y \cdot y =$ _____

29. $7x + 4y + 6x =$ _____

30. $4 \cdot a \cdot a \cdot a \cdot a \cdot 3 \cdot c \cdot c \cdot c =$ _____

31. $(7x + 5) + (6x + 1) =$ _____

32. $(6)(5y) =$ _____

33. $(3x + y) + (4x + 3y) =$ _____

34. $8(3x) =$ _____

35. $9(5x + 3) =$ _____

36. $(7y) \cdot y =$ _____

37. $3(2x - 7) =$ _____

38. $(5x)(3x) =$ _____

39. $-5(x + 7) =$ _____

40. $(5x)(3y) =$ _____

41. $-2(3x - 6) =$ _____

42. $(4x)(3y)(x) =$ _____

43. $7(x + 2) + 4(x + 5) =$ _____

44. $2(3x + 7) + 5(2x + 9) =$ _____

45. $8(x - 5) + 3(2x + 10) =$ _____

46. $6(7x + 3) + 2(8x - 9) =$ _____

47. $4(3x - 7) - 3(2x + 5) =$ _____

48. $9(x + 3) - 2(5x - 6) =$ _____