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Match the property with its name.

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

Find the value of each expression.

11.	$2 \cdot 3 + 4 =$ _____	12.	$5 + 7 \cdot 2 =$ _____	13.	$8 – 3 + 9 =$ _____
14.	$2 \cdot (3 + 4) =$ _____	15.	$(5 + 7) \cdot 2 =$ _____	16.	$8 – (3 + 9) =$ _____
17.	$20 – 8 \div 4 =$ _____	18.	$15 – 5 – 3 =$ _____	19.	$(3 + 5) \cdot (7 – 4) =$ _____
20.	$(20 – 8) \div 4 =$ _____	21.	$15 – (5 – 3) =$ _____	22.	$(3 + 5) \cdot 7 – 4 =$ _____
23.	$4 \cdot 3 + 5 \cdot 2 =$ _____	24.	$3 + 5 \cdot 7 – 4 =$ _____	25.	$3 + 5 \cdot (7 – 4) =$ _____
26.	$(94 + 47) + -47 =$ _____	27.	$4 \cdot (43 \cdot 25) =$ _____	28.	$5^3 =$ _____

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Find the value of each expression when x = 6. If the value cannot be found, write 'undefined'.

29. $x + 7 =$ _____ **30.** $x - 6 =$ _____ **31.** $x \div 6 =$ _____

32. $0 \div x =$ _____ **33.** $x \div 0 =$ _____ **34.** $(x + 3) \div (x - 3) =$ _____

35. $3(x + 6) =$ _____ **36.** $3x + 6 =$ _____ **37.** $(x + 19) - 19 =$ _____

38. $3(x - 6) =$ _____ **39.** $3x - 6 =$ _____ **40.** $(x \cdot 19) \div 19 =$ _____

Simplify each algebraic expression.

41. $5x + 3x =$ _____ **42.** $x + x =$ _____

43. $9x - 3x =$ _____ **44.** $8x - x =$ _____

45. $8x + 5y + x + 3y =$ _____ **46.** $12x + y - 10x + 2y =$ _____

47. $x \cdot x \cdot x =$ _____ **48.** $x \cdot x \cdot y \cdot y \cdot y \cdot y =$ _____

49. $3 \cdot x \cdot x \cdot 2 \cdot x =$ _____ **50.** $7 \cdot x \cdot x \cdot x \cdot 5 \cdot y \cdot y =$ _____

51. $(3x) \cdot (7x) =$ _____ **52.** $(4x) \cdot (3y) =$ _____

Use the distributive law to write the expressions without parentheses.

53. $4(x + 5) =$ _____ **54.** $3(2x + 7) =$ _____

55. $5(x - 8) =$ _____ **56.** $9(3x - 4) =$ _____

Simplify each of the following. Hint: Use the appropriate distributive property. Then combine like terms.

57. $2(x + 3) + 5(x + 2) =$ _____ **58.** $3(x + 1) + 2(x - 1) =$ _____

59. $8(x + 5) - 4(x + 6) =$ _____ **60.** $6(4x + 2) - 3(x - 4) =$ _____