

Intro to Properties sample answer sheet

Property	Addition	Subtraction	Multiplication	Division
Commutative $a + b = b + a$	$3 + 4 = 4 + 3$ $7 = 7$	$3 - 4 = 4 - 3$ $-1 \neq 1$	$3 \times 4 = 4 \times 3$ $12 = 12$	$3 \div 4 \neq 4 \div 3$ or $3/4 \neq 4/3$
Conclusion: The Commutative Property only works for: addition and multiplication				
Associative $(a + b) + c = a + (b + c)$	$(4 + 3) + 2 = 4 + (3 + 2)$ $7 + 2 = 4 + 5$ $9 = 9$	$(4 - 3) - 2 \neq 4 - (3 - 2)$	$(4 \times 3) \times 2 = 4 \times (3 \times 2)$	$(4 \div 3) \div 2 \neq 4 \div (3 \div 2)$
Conclusion: The Associative Property only works for: addition and multiplication				
Identity	$4 + 0 = 4$ $0 + 4 = 4$	$4 - 0 = 4$ $0 - 4 \neq 4$	$4 \times 0 \neq 4$ $4 \times 1 = 4 ; 1 \times 4 = 4$	$4 / 1 = 4$ $1 / 4 \neq 4$
Conclusion: The Identity Property only works for: zero with addition and one (1) with multiplication				
Substitution	A substitute teacher has the same value as your regular teacher.			
Distributive	$a(b + c) = ab + ac$ or $a(b - c) = ab - ac$...is multiplying EVERY TERM INSIDE THE PARENTHESIS by the number outside.			

Multiplicative inverse	$\frac{3}{4} \times \frac{4}{3} = \frac{3 \times 4}{4 \times 3} = \frac{12}{12} = 1$ $\frac{3}{4} \times \frac{4}{3} = \frac{3 \times 4}{4 \times 3} = \frac{3 \times 4}{3 \times 4} = \frac{3}{3} \times \frac{4}{4} = 1 \times 1 = 1$	$\frac{3}{4} \times \frac{4}{3} = (\text{cross-cancel}) = \frac{1}{1} = 1$
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Introduction to Properties Side B

Property	Addition	Subtraction	Multiplication	Division
Conclusion: The Commutative Property only works for :				
Conclusion: The Associative Property only works for:				
Conclusion: The Identity Property only works for:				

Distributive	
Substitution	

