NAME _____

Lesson 2.7 Multiplying and Dividing Using Mathematical Properties

Commutative Property: The order in which numbers are multiplied does not change the product. $a \times b = b \times a$

Associative Property: The grouping of factors does not change the product. $a \times (b \times c) = (a \times b) \times c$

Identity Property: The product of a factor and 1 is the factor. $a \times 1 = a$

Properties of Zero: The product of a factor and 0 is 0. The quotient of the dividend 0 and any divisor is 0. $a \times 0 = 0 \quad 0 \div a = 0$

Write the name of the property shown by each equation.

	a	b
1.	$3 \times (2 \times r) = (3 \times 2) \times r$	$15 \times 1 = 15$
	_____	_____
2.	$12 \times p = p \times 12$	$35 \times 0 = 0$
	_____	_____
3.	$0 \div 76 = 0$	$(8 \times 9) \times 12 = 8 \times (9 \times 12)$
	_____	_____

Rewrite each expression using the property indicated.

4.	commutative: $15 \times z$	zero: 16×0
	_____	_____
5.	identity: $12a \times 1$	associative: $14 \times (3 \times p)$
	_____	_____
6.	zero: $0 \div 68$	associative: $(6 \times 4) \times n$
	_____	_____