Name_____

Match each property or identity with the appropriate definition.

1._____ Multiplicative Identity

2._____ Reflexive Property

3._____ Additive Inverse

4._____ Distributive Property from right over addition

5._____ Commutative Property for Addition

6._____ Symmetric Property

A. Adding opposites produces a result that is the additive identity "0"

B. When a value on the right side of a set of parentheses, is multiplied across terms separated by an operation of addition.

C. Any number multiplied by zero will produce an answer of of zero.

D. When the product of a number and one is taken, the result is that the number is unchanged.

E. This is when the R.H.S. and L.H.S. of an equation are switched, but the individual terms are left in the same order.

F. When a series of terms are being added together one can regroup the terms using parentheses but the end result is left unchanged.

G. This occurs when an exact copy or duplicate of an expression or equation

H. When a series of terms are being added together one can rearrange the terms without effecting the end result.

Match each property or identity with the approp[riate example.

1._____ Transitive Property

2._____ Substitution Property

3._____ Associative Property for Multiplication

4._____ Distributive Property from right over subtraction

5._____ Additive Identity

6._____ Multiplicative Inverse

7._____ Commutative Property for Multiplication

8._____ Symmetric Property

9._____ Multiplicative Property of Zero

A. $(de)f = d(ef)$

B. $-\frac{5}{7} = -\frac{5}{7} + 0$

C. $2(5)(9) = 2(9)(5)$

D. $-6 + 6 = 0$

E. If $A - 7 = B + 4$, then $B + 4 = A - 7$

F. $7(2x + 3) = 14x + 21$

G. If $2(5) = 7 + 3$ and $7 + 3 = 10$, then $2(5) = 10$

H. $7 + 2 + 5 = 2 + 5 + 7$

I. $(4p - 5)2 = 8p - 10$

J. $-\frac{4}{5}(0) = 0$

K. $11^2 + [6 - 3] = 121 + 3$

L. $1 = \frac{-1}{17} \bullet \frac{-17}{1}$

Find the pattern and fill in the blanks

A. 5, 6, 4, 7, 3, 8, _____ , _____ , _____ , _____

B. 1, 3, 1, 2, 6, 4, 5, 15, 13, 14 _____ , _____ , _____

Determine if each of the following operations are closed under the given number set.

1. {Odd Integers}; multiplication 1. _____
Counter example if applicable:

2. {Whole}; $-A\cdot(B-5)$ 2. _____
Counter example if applicable:

3. {Odd Integers}; subtraction 3. _____
Counter example if applicable:

4. {Even Whole}; addition 4. _____
Counter example if applicable:

5. {Odd Integers}; $(A-1)+(B+2)$ 5. _____
Counter example if applicable:

Use the Distributive Property to simplify each expression.

6. $3(8x-1)-5(2x+3)$ 6. _____

7. $5(2k+3)-7(2k-1)+2k$ 7. _____

8. $\frac{2}{5}(10k+25)-\frac{3}{4}(12k-8)+2k$ 8. _____

Order of Operation

1. $\left(\frac{1}{3}\right)^2 - \left[\frac{2}{3} + \frac{1}{5} \div 2 \bullet \frac{5}{6} - \frac{3}{4}\right]$ 1._____

2. $\left(\frac{8}{9} - \frac{2}{3}\right) \div \frac{4}{9} - \frac{1}{2} \bullet \frac{1}{5}$ 2._____

Write the Solution Set to each of the following.

3. $9x - 20 = x^2$ replacement set ={-3, 4, 5, 10} 3._____

4. $5x + 7 < 10x$ replacement set = {-7, -1, 3, 4, 11} 4._____

5. $x^2 - 11 \geq x$ replacement set = {-4, -1, 1, 4, 10} 5._____