Name_____

Match each property or identity with the appropriate definition.

1._____ Multiplicative Inverse

2._____ Transitive Property

3._____ Additive Identity

4._____ Distributive Property f
rom left over subtraction

5._____ Multiplicative Property of Zero

6._____ Associative Property for Multiplication

7._____ Commutative Property for Addition

A.When a value on the left side of a set of parentheses, is multiplied across terms separated by an operation of subtraction

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

C. Two valid statements will initially be given, one can then logically arrive at a third valid statement by passing on the shared trait.

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

E. When the sum of a number and zero is taken, the result is that the non-number is unchanged.

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

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

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

I. Multiplying reciprocals produces a result that is the multiplicative identity "1"

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

1._____ Reflexive Property

2._____ Additive Inverse

3._____ Substitution Property

4._____ Distributive Property from right over addition

5._____ Symmetric Property

6._____ Multiplicative Identity

7._____ Commutative Property for Multiplication

8._____ Associative Property for Addition

9._____ Multiplicative Property of Zero

10._____ Commutative Property for Addition

A. If a = b, and b = c, then a = c.

B. $2(4 + 3) = 2(7)$

C. $1 \bullet \left(-\frac{4}{5}\right) = -\frac{4}{5}$

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

E. $cd - 7 = dc - 7$

F. $(a + b) + c = a + b + c$

G. $5 \cdot 7 \cdot 0 \cdot 3 = 0$

H. $ab + 5 + c = 5 + ab + c$

I. $11y + 2 = 11y + 2$

J. $(3w + 7)5 = 15w + 35$

K. $-4 + 4 = 0$

L. If $w = 3f - 7$, then $3f - 7 = w$

J. $B \bullet \left(\frac{1}{B}\right) = 1$

Find the pattern and fill in the blanks

A. 35, 32, 37, 34, 39 _____ , _____ , _____

B. 2, 8, 6, 9, 36, 34, 37 _____ , _____ , _____

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

1. {Odd Integers}; $A^2 + B$ 1. _____

Counter example if applicable:

2. {Whole}; $A \cdot (2B + 1)$ 2. _____

Counter example if applicable:

3. {Even Integers}; (A–3) – (B + 1) 3. _____

Counter example if applicable:

4. {Even Whole}; multiplication 4. _____

Counter example if applicable:

5. {Odd Integers}; $(A - 1) + (B + 3)$ 5. _____

Counter example if applicable:

Use the Distributive Property to simplify each expression.

6. $5(3x - 1) + 2(4x + 3)$ 6. _____

7. $11(2m + 5) - 7(5m - 2) - 2m$ 7. _____

8. $\frac{2}{7}(14h + 28) - \frac{3}{5}(20h + 40) + 3h$ 8. _____

Order of Operation

1. $5\left[\frac{1}{2}+\left(\frac{3}{5}\bullet\frac{5}{6}\right)\div\frac{5}{8}\right]$ 1._____

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

Write the Solution Set to each of the following.

3. $x^2-3\geq x$

   r = {-4, -1, 1, 4, 10} 3._____

4. $x^2-14\geq x$

   r = {-4, -1, 1, 4, 10} 4._____

5. $2x+5>x^2$

   r = {-1, 1, 2, 3, 4, 5,7}

   5._____

Translate the following but DO NOT SOLVE
Use "x" to represent the number unless otherwise stated

1. The difference of five times a number and seven is the same as three less than thirteen times the number.

1_____

2. Two subtracted from nine times a number is the same as three more than twice the sum of six times a number and five.

2_____

3. Four times the sum of twice the cube of a number and seven is four less than nine times the number.

. 3_____

4. The square of the difference of nine times a number and two is four more than twice the sum of the number and five.

4_____

5. Ten times the sum of five times a number and three is four less than nine times the number.

5_____

6. Four times the difference of seven and six times the square of a number is two less than five times the cube of the number.

6_____