Name_____ Pd_____ Date_____ **Section 1.B.2**

Number Properties

Property	Addition	Multiplication
Commutative:	$a + b = b + a$	$a \cdot b = b \cdot a$
	Ex.	Ex.
Associative:	$(a + b) + c = a + (b + c)$	$(a \cdot b) \cdot c = a \cdot (b \cdot c)$
	Ex.	Ex.
Identity:	$a + 0 = a$	$a \cdot 1 = a$
	Ex.	Ex.
Properties to Get Zero:	Inverse Property of Addition $a + (-a) = 0$	Zero Property of Multiplication $a \cdot 0 = 0$
	Ex.	Ex.
Property to Get the Opposite Sign:		Multiplication Property of -1 $-1 \cdot a = -a$
		Ex.

Matching

1. Associative Property of Addition
2. Associative Property of Multiplication
3. Commutative Property of Addition
4. Commutative Property of Multiplication
5. Identity Property of Addition
6. Identity Property of Multiplication
7. Inverse Property of Addition
8. Multiplication Property of -1
9. Zero Property of Multiplication

a. $15y + 0 = 15y$

b. $7b \cdot 2 = 2 \cdot 7b$

c. $(c \cdot 3) \cdot 5 = c \cdot (5 \cdot 3)$

d. $6x + 5y = 5y + 6x$

e. $-2a \cdot 1 = -2a$

f. $(g + 11h) + 9h = g + (11h + 9h)$

g. $7k \cdot 0 = 0$

h. $-15m \cdot (-1) = 15m$

i. $-9p + 9p = 0$

Parts of an Algebraic Expression

Term: Any piece of an algebraic expression that is being

_____ to the other terms.

$$4x^2 + 2x - 5 + 6x^2 - 7x + 1$$

Constant Term:
A term that is only a

_____.

Its value _____

_____.

Variable Term:
A term that includes a _____.

Its value depends on the _____.

Coefficient:

Variable:

Circle the coefficients and underline the variables.

$$4x^2 + 2x - 5 + 6x^2 - 7x + 1$$

Like Terms: Terms with the same

_____ and

the same _____.

_____ these terms we are able to

_____ by

_____.

$$4x^2 + 2x - 5 + 6x^2 - 7x + 1$$

Why do we care about like terms?

Terrance gets paid different hourly rates at his jobs. At Charlie's Cheeseburgers, he is paid *c* dollars per hour. At Wally's Waffles, he is paid *w* dollars per hour. On Friday, he works 6 hours at CC and 3 hours at WW. On Saturday, he works 2 hours at CC and 7 hours at WW. On Sunday, he works 4 hours at CC and 1 hour at WW. Write an algebraic expression for how much Terrance will get paid for these 3 days of work.

Evaluate your algebraic expression for hourly rates of $c = 7$ and $w = 9$.