Grab a Warm Up worksheet from the front table and begin working on the order of operations problems. Show your work going down the page.

Classwork - Combining Like Terms Review

Evaluate (solve) the following problems using the order of operations (PEMDAS). Work down the page and show each step you take to get your answer. **DON'T USE A CALCULATOR!**

A) $-7 - 13 \cdot 2 + 5$

$-7 - 26 + 5$

$-33 + 5$

$\boxed{-28}$

B) $4 + 6 \div 3 \cdot 10$

$4 + 2 \cdot 10$

$4 + 20$

$\boxed{24}$

C) $5 \cdot 4 - 5 + 7$

$20 - 5 + 7$

$15 + 7$

$\boxed{22}$

D) $(12^2 \div 6) + 7$

$(144 \div 6) + 7$

$24 + 7$

$\boxed{31}$

E) $88 \div (4 \cdot 11) - 5$

$88 \div 44 - 5$

$2 - 5$

$\boxed{-3}$

F) $(7 + 3^3) \div (17 - 8)$

$(7 + 27) \div 9$

$34 \div 9$

$\boxed{3.\overline{7}}$

G) $5 \cdot (63 \div 81^{\frac{1}{2}}) + 8$

$5 \cdot (63 \div 9) + 8$

$5 \cdot 7 + 8$

$35 + 8$

$\boxed{43}$

H) $(48 \div 6 \cdot 2^{-2}) - 15$

$(48 \div 6 \cdot \frac{1}{4}) - 15$

$(8 \cdot \frac{1}{4}) - 15$

$2 - 15$

$\boxed{-13}$

I) $12 + (5 - 8) \cdot 2$

$12 + (-3) \cdot 2$

$12 + (-6)$

$\boxed{6}$

## Like terms have:
- same variable with the SAME exponent (if there is one)
- are number with no variables (constants)
- **PAY ATTENTION TO THE + OR – in front of each term**

## Steps to Combining like terms
A) Draw boxes around like terms (INCLUDE THE SIGN)
B) Draw a circle around other like terms (INCLUDE THE SIGN)
C) Look at like terms and add/subtract them
    -Write the answer BELOW the expression

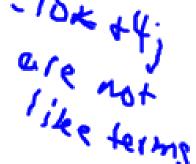> What number can I write in front of a variable that has no number?
>
> $x$         $y$         $z$

## Practice:
    **\*Hint – If the first term doesn't have a sign in front of it → write a + sign**

**Combine the like terms in the expressions below. If you cannot combine anything, explain why.**

A) $5x + 8x + 3x$

$16x$

B) $-7y + 2 - 4y$

$-11y + 2$

C) $-10k + 4j$

$-10k + 4j$ are not like terms

D) $-7a + 3a + 2b$

$-4a + 2b$

D) $x - 9 + 9x + 7$

$$10x - 2$$

E) $-15 - 3x - 5y - 7$

$$-2y - 22$$

F) $-0.3a - 5.2a - 9 + 2c$

$$-5.5a + 2c - 9$$

G) $\frac{3}{5}a + 15 - \frac{7}{10}a - 12$

$$-\frac{1}{10}a + 3$$

H) $12ab + 15a - 8ab$

$$4ab + 15a$$

I) $2x^2 + 3x - 5x^2$

$$-3x^2 + 3x$$

J) $-6b^3 + 4b^2 + 8b^2 + 2b^3$

$$-8b^3 + 12b^2$$