

## Combining Like Terms (Part 2)

### LIKE TERMS

1) number terms

23,  $\frac{1}{4}$ , 0.07

2) "a" terms

2a, -3a,  $\frac{a}{2}$

3) "a" "c" "m" terms

acm, mca, 4mca

4) terms with 2 "a"s and one "m"

$a^2m$ ,  $ma^2$ , aam

\* proper order = alphabetical

### UNLIKE TERMS - can not combine when adding & subtracting

1) number term, "y" term

3, y

2) number term, "a" term

4, 2a

3) "a" term, "c" term

2a, 2c

4) first term with variables "a" "c", "m"

4acm, 3ac

5) first term has 2 "a"s and one "m" and second term has 2 "m"s and one "a"

$a^2m$ ,  $am^2$

### Practice:

1) 3cde and -8 dec

like or unlike

2)  $5pqr^2s$  and  $9prq^2s$

like or unlike

Guidelines for telling whether or not you are dealing with "like terms":

- 1) all numbers are like terms
- 2) all terms with the same combination of variables are like terms regardless of their order.
- 3) a variable term standing alone and the same term with a number (coefficient) in front are like terms ex.  $ac$  &  $2ac$   
 $4xma$  &  $axm$

Although terms like "ac" and "ca" look different, the commutative property guarantees that they are like terms.

$$ac = ca$$

More examples of like terms:

- 1)  $ax^2m$  and  $mx^2a$
- 2)  $xna$  and  $7axn$
- 3)  $5mrv$  and  $7rvm$

Make up an example of your own:  $\frac{1}{2}xy^2z$  and  $\frac{3}{5}y^2zx$

STEPS FOR COMBINING LIKE TERMS:

$$-5x^3 + 3y + 7x^3 - 2y - 4x^2$$

1) Identify terms that are alike

They must have the same

variable. Then, group

them.

Use a color code or symbols  
to group the terms that go  
together.



2) Combine like terms by adding  
or subtracting the

coefficients. Make sure

to bring the sign in front of

the term with the term when  
you combine them.

$$-5x^3 + 7x^3$$

3) Order the combined terms

by degree (exponent) and

alphabetical order.

$$2x^3 - 4x^2 - y$$

Practice:

1)  $6v - 2xy^2 - 8v + 4xy - 5v^2 + 6xy^2 - 3w + 4v^2$

2)  $10a^2b - 12ab^2 + 6b - c + 3a^2 - 3ab^2 + c^2 - 5b + 4a^2b - 8$