

Task 1 & 2

5.2

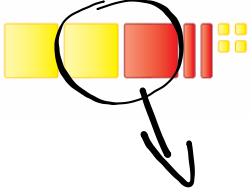
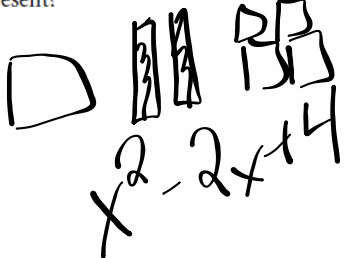
## Like Terms and Unlike Terms

Feb. 4, 2016

Feb. 4, 2014

When you work with integers, a 1-tile and a -1-tile form a zero pair. → 0

What do you think happens when you combine algebra tiles with opposite signs? Which expression do these tiles represent?

**FOCUS**

- Simplify polynomials by combining like terms.

Sep 22-9:41 PM

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$2x^2 + 4x + 5$

**Literal Coefficients** are variables (letters) that represent unknown numbers.

**Numerical coefficients** are numbers

**Terms** are made up of numerical and literal coefficients

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TASK 1 &amp; 2

## Like Terms

Terms with identical **literal coefficients** are **like terms**.

EXAMPLE:

$y, 3y, -2y$  are like terms

$x, -2g, 3k$  are not like terms

Basically the variable has to be the same.

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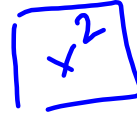
## Like Terms

Also the variable needs to be the **same power** to be like terms

Example:

$y^2, -2y^2, 45y^2$  are like terms

$y, -20y^2, 5y^3$  are **not** like terms



The exponent has to be the same number.

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# Try These

Which are like terms? Why?

$\begin{matrix} (x^2) & (x^2) \\ \diagdown & / \\ & x^2 \end{matrix}$   
 $5b, (3g), (-2g), 2g^2, (5g), (1/2g), (-g)$

1. Like terms have the same degree.

2. Like terms may have different coefficients.

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Algebra tiles that are the same size and shape are called **like terms**. Already in your notes...

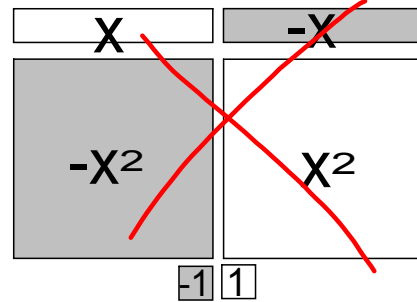
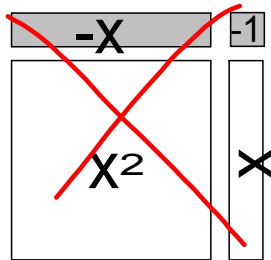
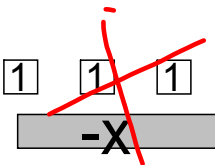
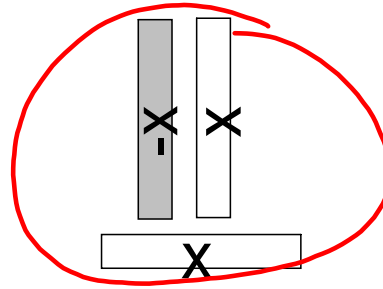
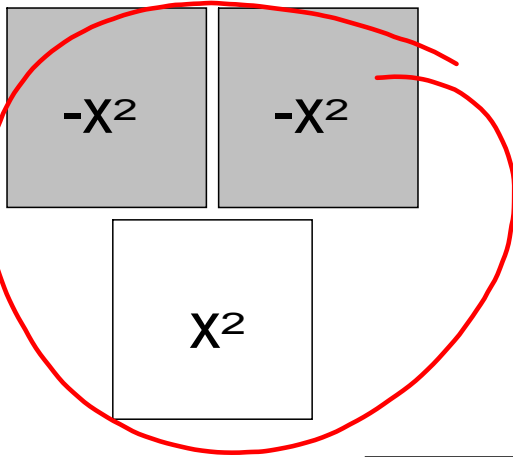
<i>Like Terms</i>		<i>Unlike Terms</i>	
$X^2$	$-X^2$	$-X^2$	$1$
$1$	$-1$	$-X$	$1$
$-X$	$-X$	$X^2$	$X$

Nov 16-4:30 PM

**YOU TRY!**

Circle the groups that have all like terms

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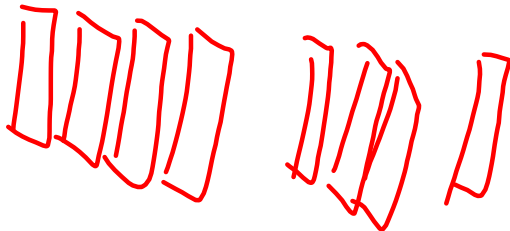


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**Combining Like Terms**

$$4m + 3m + m = 8m$$



There are three variables which are like terms therefore we simply add them like we would if they were numbers.

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## Combining Like Terms

$$k + k + k + k + k = 5k$$

There are five variables which are like terms therefore we simply add them like we would if they were numbers.

$$k + k + k + k + k = 5k$$

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## Combining Like Terms

$$2x^2 + 8 - 5x^2$$

$$\begin{array}{r} \underline{2x^2} - \underline{5x^2} + 8 \\ -3x^2 + 8 \end{array}$$

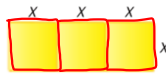
Rearrange the variables so that all like terms are side by side

notice that the sign in front of the number came with the number

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Example #3: What is the perimeter?

Copy down in your notes



Perimeter is the distance around an object.

$$P = x + x + x + x + x + x + x + x$$

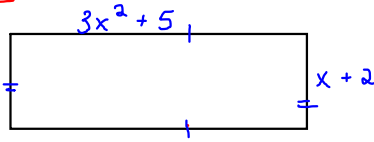
$$P = 8x$$

$$P = x + x + x + 1 + 1$$

$$+ x + x + x + 1 + 1$$

$$= 6x + 4$$

Ex: 4:



Perimeter?

$$= (3x^2 + 5) + (3x^2 + 5) + (x + 2) + (x + 2)$$

$$= 6x^2 + 2x + 14$$

What is the perimeter if  $x = -2$ ?

$$= 6(-2)^2 + 2(-2) + 14$$

$$= 6(4) + (-4) + 14$$

$$= 24 + (-4) + 14$$

$$= 34$$

Feb 8-11:26 AM