

Name: _____

Date: _____

Notes

Algebra Section 2.5

Pages 96-101



Goal: "You will apply the distributive property"
"You will combine like terms"

Vocabulary:

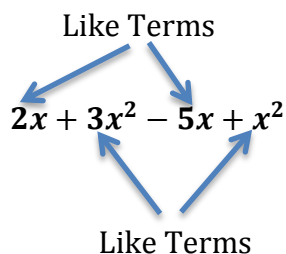
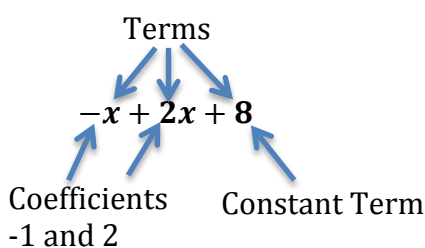
Term: The parts of an _____ that are _____ together.

Like Terms: _____ that have the same _____ parts.

Coefficient: The _____ part of a _____ with a _____ part.

Constant term: The _____ part that has _____ variable part.

Terms:



Example: $3x + (-4) + (-6x) + 2$

Terms: $3x, -4, -6x, 2$

Coefficients: $3, -6$

Like Terms: $3x$ and $-6x$
 -4 and 2

Constants: -4 and 2

Try These:

1) $3x + (-5) + 2x^2 + 6 + 9x$

2) $3xy + 4x - 7xy + 5y - 2x + 9$

Terms:

Terms:

Like Terms:

Like Terms:

Coefficients:

Coefficients:

Constants:

Constants:

Combine Like Terms: Highlighters can be helpful.

$3x + 9 - 2x - 7$

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

$4x + 3xy - 9x - 8xy$

$-b + 3b^2 - 5b - 5b^2 + 4$

$2x^2 - 6 + x^3 - x^2 + 3$

$-3w + 1 - 5w - 9 + w$

Distribute: Multiply both terms inside the parentheses by the factor outside.

$$5(x + 4)$$


$$5(x + 4)$$

Examples:

$$3(x + 6)$$

$$4(y - 8)$$

$$-2(5 + 3x)$$

$$-(4x - 7)$$

$$-2(m - 9)$$

$$a(3b - 8)$$

Rewrite if factor is on the right of the parentheses.

$$(2b - 3)7$$

$$(-3x + 4)(-5)$$

$$(3x + 4)(-3)$$

$$(-3 - 4n)(-5n)$$

$$(4x + 3)(-2y)$$

$$(-4w - 8)(-2w)$$

Distribute a negative. Take the opposite of everything in the parentheses.

$$-(5x - 6)$$

$$-(5d^2 + 4d - 8)$$

$$-(-3xy + 2x - 9y)$$

Distribute and Combine Like Terms:

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

$$-8 + 3(5x - 4)$$

$$2(w - 7) - 8w$$

$$(3x - 8)(-4) + 6$$

$$2(3x - 5) + 3(-x + 3)$$

$$-2(-4x + 7) - (-3x + 2)$$

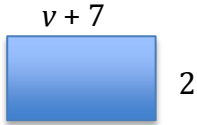
$$-(3a - 5b) + 2(2a - 4)$$

$$-(3w + 6) - (4 - 2w)$$

$$-(3x + 2) - 3(2 + x) + 2$$

Geometry:

Find the area and perimeter of each rectangle.

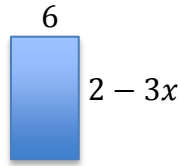


$$l=2$$

$$w=(v+7)$$

$$A (lw)=$$

$$P (l+l+w+w)=$$

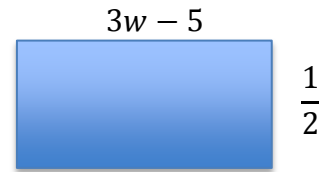


$$l=6$$

$$w= (2-3x)$$

$$\text{Area } (lw)=$$

$$P (l+l+w+w)=$$



$$l=\frac{1}{2}$$

$$w=(3w-5)$$

$$\text{Area } (lw)=$$

$$P (l+l+w+w)=$$

Word Problems:

Your daily workout plan involves a total of 50 minutes of running and swimming. You burn 15 calories per minute when running and 9 calories per minute when swimming. Let r be the number of minutes that you run.

a) Suppose you run for 20 minutes.

a. How many minutes do you swim? _____

How did you find your answer? _____

b. How many calories do you burn swimming? _____

How did you find your answer? _____

c. How many calories do you burn running? _____

How did you find your answer? _____

d. How many calories do you burn in total? _____

How did you find your answer? _____

b) Suppose you do not know how many minutes you run. Use r for the number of minutes you run and write an expression for the total calories burned. Follow the process above but use r instead of 20.

You are planning a party and need to buy snacks. You plan on buying a total of 8 bags of snacks (Chex Mix and Cheetos). You buy (m) bags of Chex Mix. The Chex Mix costs \$2 a bag and Cheetos costs \$3 a bag.

a) Write an expression for the number of bags of Cheetos you buy.

b) Write an expression for the **total** cost of buying the snacks.

c) How much will you spend in **total** if you buy 6 bags of Cheetos?