



- Spiral/comp notebook
- Pencil







What phones are alike?

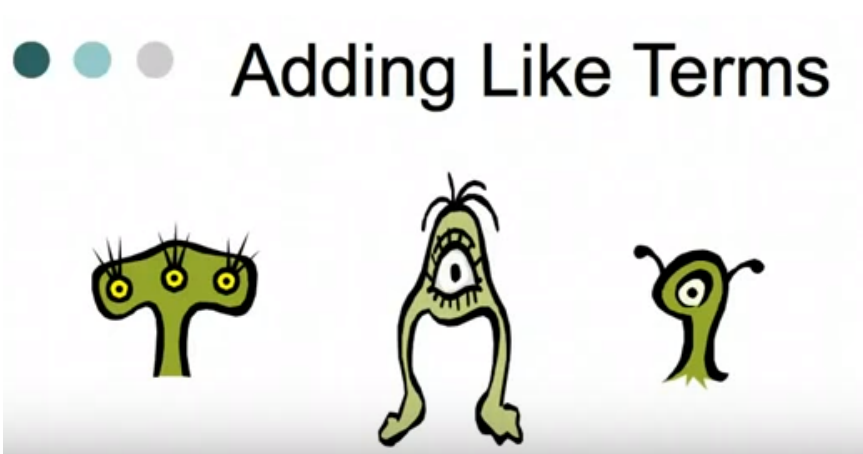


<p>3x and 2x 7x², 6x² and x²</p>	<p>Like Terms Terms that have the same power of the same variable are called <i>like terms</i>.</p>	<p>3y and 7y 3y² and 2y²</p>
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<p>3x 3y</p>	<p>Unlike Terms Terms that do not contain the same power of the same variable are called <i>unlike terms</i>.</p>	<p>3x 6x²</p>
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Like Terms	Unlike Terms
2x + 19x	2x + 19a
4w - 10w	4w - 10w ²
14.2r - 12r	12r - 12s
32a ² + 9a ²	32a ² + 9a ³
8y + 5y	8y + 5

Like terms	Unlike terms
2x, -7x	2x, -7y
-8x ² , 3x ²	-8x ² , 3x
13xy, -7xy	13xy, -7xz
5x ² y, 3x ² y	5x ² y, 3xy ²
x, 4x	x, 4



<https://www.youtube.com/watch?v=Al54zRTGx9o>

How to Combine Like Terms

To Combine Like Terms, we add together items that are the same to make a simplified shorter list of items.

Consider the following family take-away order:



We can write this in Algebra as: $2b + f + d + 3b + 2f + 2d$

If we combine like items, we get a simplified list as follows:



Images from Clker.com

$$(14) - 3z + 8 + 1z$$

$$(-3z + 1z) + (14 + 8)$$

$-3+1$

$$-2z + 22$$

$$22 - 2z$$

$$\rightarrow -2z + 22$$

$$2a^3 - 10ab^2 + 3a^3 - ab^2 - 7$$

-10 + (-1)

$$5a^3 - 11ab^2 - 7$$

Adding Like Terms

$$2a^3 + 3a^3$$

$$5a^3$$

multiplying

$$(2a^3)(3a^3)$$

$$2aaa \quad 3aaa$$

$$6a^6$$

$$\textcircled{8y} + \boxed{4y^2} - \underline{6} + \textcircled{3y} + \underline{10}$$

$$11y + 4y^2 + 4$$

Standard form \rightarrow

$$\boxed{4y^2 + 11y + 4}$$

Distributive Property

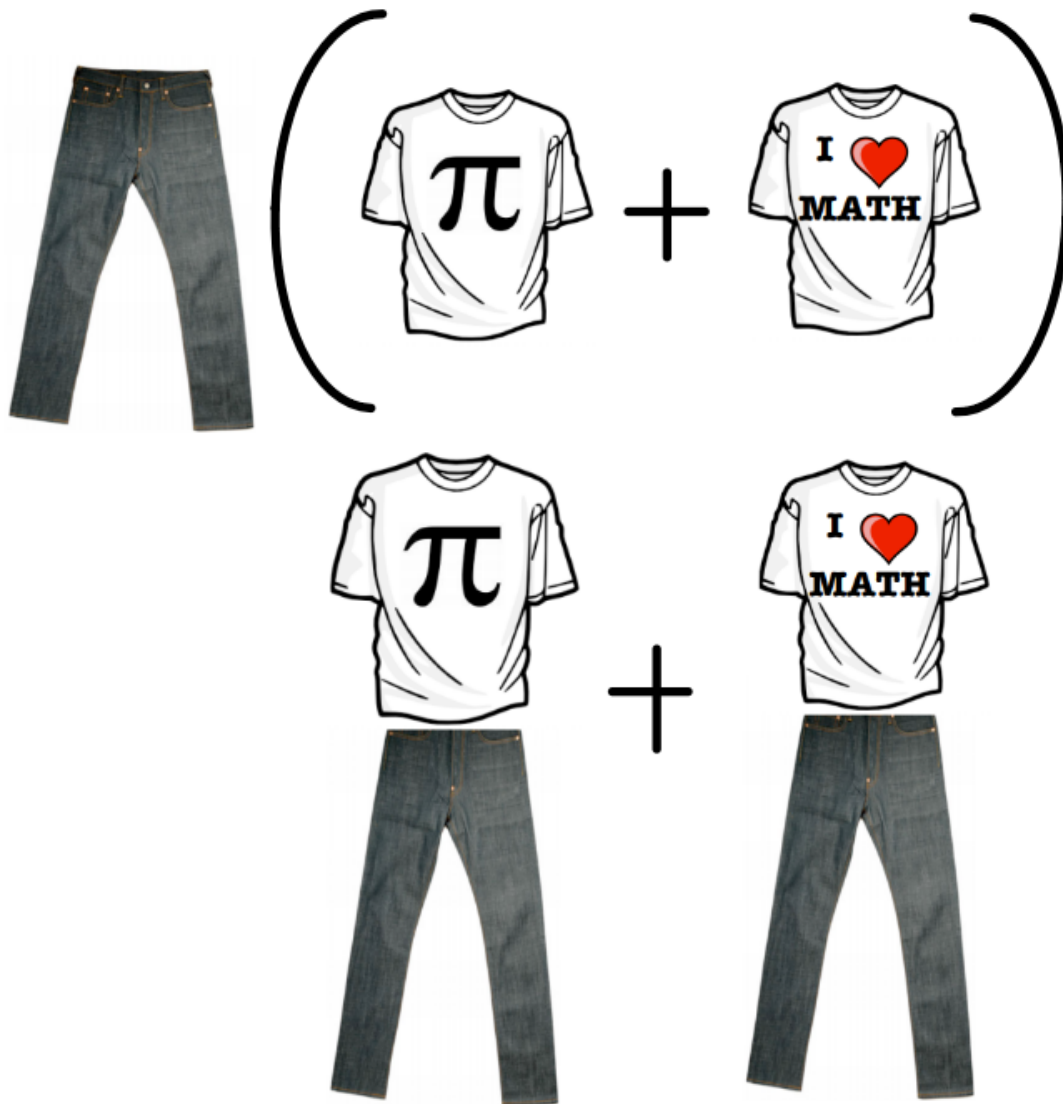
Happy (Birthday + Thanksgiving)



+



Happy Birthday + Happy Thanksgiving



Distributive Property

$7 (\text{m} + \text{c} + \text{f} + \text{a})$

$7m + 7c + 7f + 7a$

$4 (3w + h + c)$

$12w + 4h + 4c$

$$9a + 10(6a - 1)$$
$$9a + 10(6a) + 10(-1)$$
$$(9a) + (60a) - 10$$
$$\boxed{69a - 10}$$



$$-9(6m - 3) + 6(1 + 4m)$$
$$\underbrace{-9(6m)} - \underbrace{9(-3)} + \underbrace{6(1)} + \underbrace{6(4m)}$$
$$\boxed{-54m} + 27 + 6 + \boxed{+24m}$$
$$\boxed{-30m + 33}$$

$$\begin{aligned} & -7(n+3) - 8(1+8n) \\ & \underbrace{-7(n)} \quad \underbrace{-7(3)} \quad \underbrace{-8(1)} \quad \underbrace{-8(8n)} \\ & -7n \quad -21 \quad -8 \quad -64n \\ & \boxed{-71n - 29} \end{aligned}$$

$$\begin{aligned} & (x-3)(6x-2) \\ & \underbrace{x(6x)} + \underbrace{x(-2)} \quad \underbrace{-3(6x)} \quad \underbrace{-3(-2)} \\ & 6x^2 \quad -2x \quad -18x \quad +6 \\ & \boxed{6x^2 - 20x + 6} \end{aligned}$$

$$(4a + 2)(6a^2 - a + 2)$$

$$\underbrace{4a(6a^2)} + \underbrace{4a(-a)} + \underbrace{4a(2)} + \underbrace{2(6a^2)} + \underbrace{2(-a)} + \underbrace{2(2)}$$

$$\boxed{24a^3} - \boxed{4a^2} + \underline{8a} \quad + \boxed{12a^2} - \underline{2a} + 4$$

$$\boxed{24a^3 + 8a^2 + 6a + 4}$$

$$(7k - 3)(k^2 - 2k + 7)$$
$$\underbrace{7k(k^2)} + \underbrace{7k(-2k)} + \underbrace{7k(7)} - \underbrace{3(k^2)} - \underbrace{3(-2k)} - \underbrace{3(7)}$$
$$7k^3 - 14k^2 + 49k - 3k^2 + 6k - 21$$
$$7k^3 - 17k^2 + 55k - 21$$