

## Like Terms

Algebra Vocabulary Variable- a letter that stands for a number: x, y, a, c&hellip;What x stand for in one problem will be different from what x stands for in another problem. It varies, so it is called a variable. Coefficient- the number that comes before the variable. The coefficient and the variable are being multiplied. 3a means 3 times a or 3 a&rsquo;s (like 3 apples)If no coefficient is written, the coefficient is 1.Examples: 7yz (7 is the coefficient), 135q (135 is the coefficient), a (1 is the coefficient) Constant- a regular number (no variable attached to it), Ex: 5, 3/5, -11Constants do not change how much they are worth from problem to problem like variables do. They are constantly the same, so they are called constants. Exponent- the little number to the top right of a constant or variable, squared, cubed, 4th power, etc.If no exponent is written, the exponent is 1.Examples: 6<sup>2</sup> is 6 squared, 2 is the exponent, it means 6 times 6 z<sup>5</sup> is z to the power, 5 is the exponent, it means z times z times z times z times z y, since no exponent is written, the exponent is 1

Like terms- must have the exact same variables and exponents, they can have different coefficientsExamples: -9xy is a like term with  $\frac{1}{2}xy$ , 4a & 23a are like terms, y<sup>3</sup> & -96y<sup>3</sup> are like termsConstants are all like terms with each other: 45, -99, 8743, 7/9, etc. These are not like terms: 2y and 4y<sup>2</sup> because the y&rsquo;s do not have the same exponent In some books, like terms are called similar terms. Like terms can be added or subtracted.Unlike terms cannot be added or subtracted. Examples;-7yz<sup>2</sup> + 2yz<sup>2</sup>= -5yz<sup>2</sup> The coefficients are added and the variable part stays the same.2x &ndash; 8xy= can&rsquo;t be done because they aren&rsquo;t like terms, their variable parts are different You do not need like terms to multiply or divide! (7y)(-6b)= -42by You multiply the coefficients and put the variables together. (8x)(4x)(2)= 64x<sup>2</sup>You multiply the coefficients and the constant, then since they both have the same variable, you add the exponents. 9x/3= 3x You divide the coefficient by the constant in the denominator and the variable stays the same.

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