

## VL5C Linear Equations in Standard Form

Recall that \_\_\_\_\_ is the standard form of a linear equation.

### EQUIVALENT EQUATIONS:

Sometimes the coefficients are fractional and may be difficult to work with. Therefore, we write an \_\_\_\_\_ with integer coefficients that is easier to use in computation. You can write equivalent equations in standard form by simply multiplying each term in the equation by a \_\_\_\_\_.

Ex 1) The equation  $4x - 12y = 8$  can be written as  $8x - 24y = 16$  if we multiply each term by 2. Put each of these equations in slope-intercept form and you can see that they still represent the same line. Try it!!!

### STANDARD FORM using INTEGER COEFFICIENTS:

Ex 2) Write  $0.5x + 6y = 3.5$  in standard form using integer coefficients.

### MISSING COEFFICIENTS in a STANDARD FORM EQUATION:

Ex 3) Solve for the missing coefficient in the equation  $Ax + 3y = 2$  if the line passes through the point  $(-1,0)$ .

### YOU TRY:

Ex 4) Write  $4x + 1.5y = 7$  in standard form with integer coefficients.

Ex 5) Solve for the missing coefficient in the equation  $5x + By = 12$  if the line passes through the point  $(4,-2)$ .