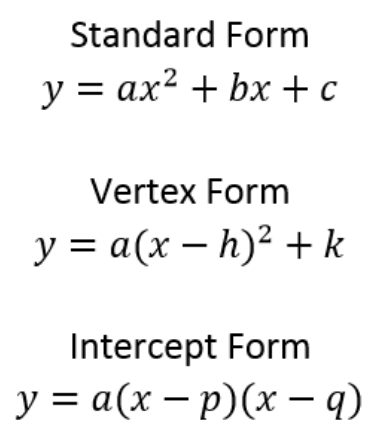
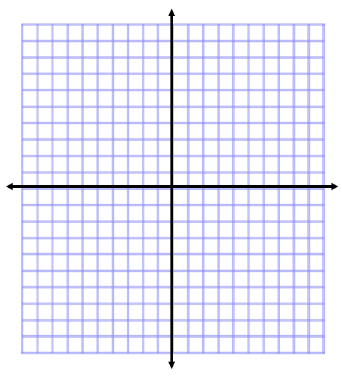
Quadratics in Intercept Form Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

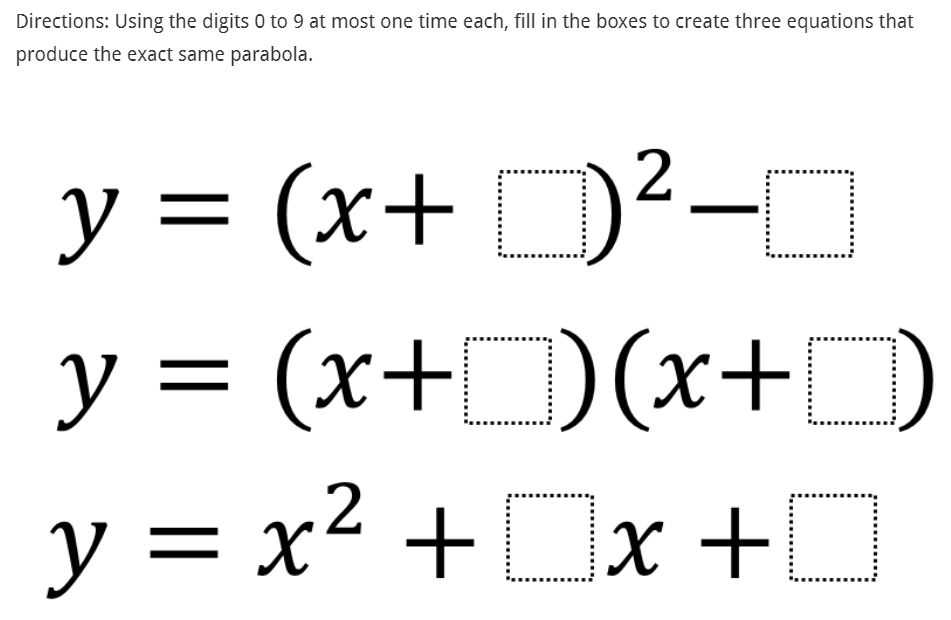
*Algebra 1H* Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Per\_\_\_\_\_\_\_\_\_\_\_\_\_

* Recall that there are three forms quadratic functions can be given in:



* Thus far you have mastered **standard form** and **vertex form**.

1. Why do you think **intercept form** is called **intercept form**? What do you think the variables ***p*** and ***q*** represent?
2. Go to desmos.com graphing calculator and graph the following four functions. *Take note of the relationship between the vertex and the intercepts of each graph.*
3. What information is given in **intercept form**? How can this help us graph the parabola by hand?
4. What information do we still need to complete the graph of the parabola?
5. Based on your answers to #3 and #4, develop a strategy for graphing a quadratic function given in **intercept form** by hand.
6. Using the strategy you developed in #5, identify the vertex, axis of symmetry, domain and range of the following quadratic function, then graph the function. Then, verify your graph by graphing the function in desmos. 
7. Write a quadratic function in **intercept form** that opens down and has intercepts (7,0) and (-2,0). (*Hint - there is more than one possible equation that satisfies these conditions!*)
8. How are **standard form** and **intercept form** connected?
9. Using the digits 0 to 9 at most one time each, fill in the boxes to create three equations that produce the exact same parabola. *This will take a bit of trial and error!*

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