Algebra 1 Week 3 Work Graphing parabola's connecting zero's as x-intercepts

Parts of a Parabola:

1. Where are the x-intercepts of any graph located?
2. What is the lowest or highest point on a parabola called?
3. Can you think of a time where the graph of a parabola will NOT have two x-intercepts?
4. Algebraically the x-intercepts are what of a quadratic function?

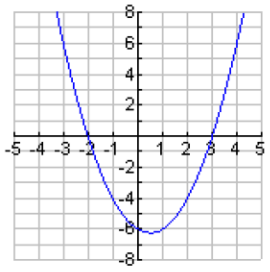
Determine the vertex of each parabola.

1. $y = (x + 4)(x + 12)$
2. $y = 8(x - 5)(x + 9)$
3. $y = (x - 7)(x - 1)$
4. $y = -0.5(x - 1)(x + 7)$
5. $y = 2(x - 2)(x - 4)$
6. $y = 3x(x - 2)$

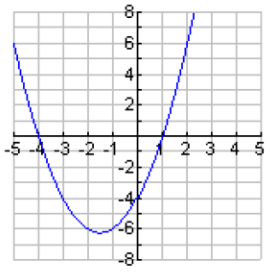
Graphing Quadratic Functions from their factored form:

Match each equation to its graph.

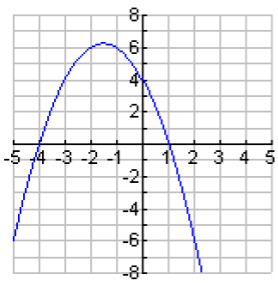
Graph A



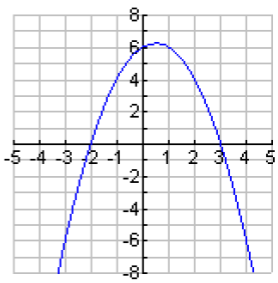
Graph B



Graph C



Graph D



1) $y = -(x+4)(x-1)$

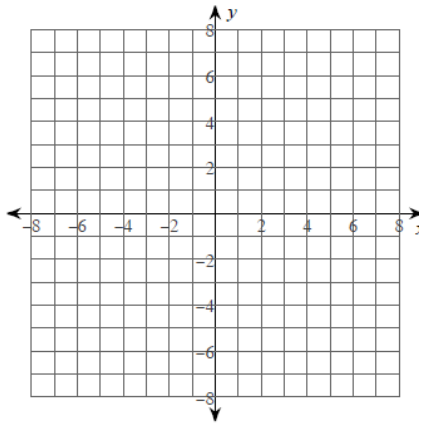
2) $y = (x+2)(x-3)$

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

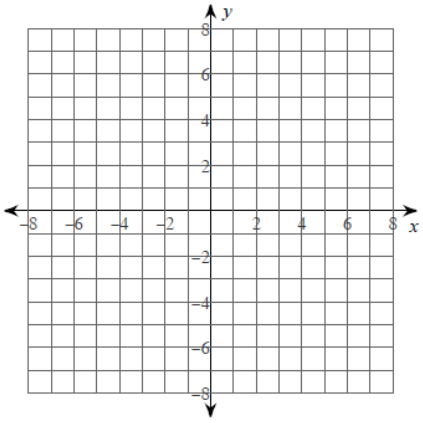
4) $y = -(x+2)(x-3)$

Graph the following parabolas. (please do the calculations on a separate sheet of paper)

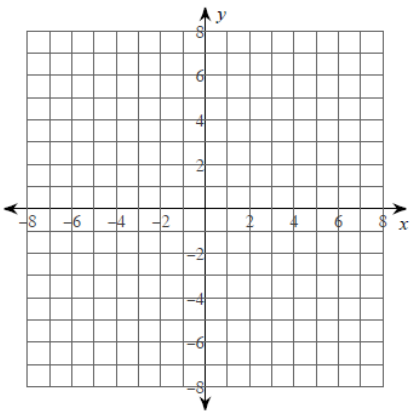
1) $f(x) = (x - 1)(x + 3)$



3) $f(x) = (x + 5)(x + 1)$



4) $f(x) = -(x - 4)(x - 2)$



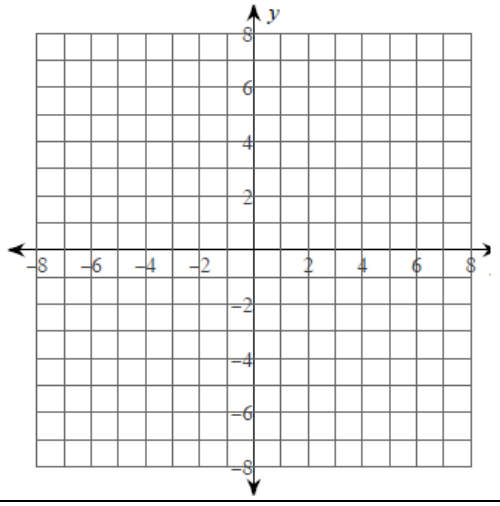
Summary Assignment Week 3

Determine the vertex for each parabola.

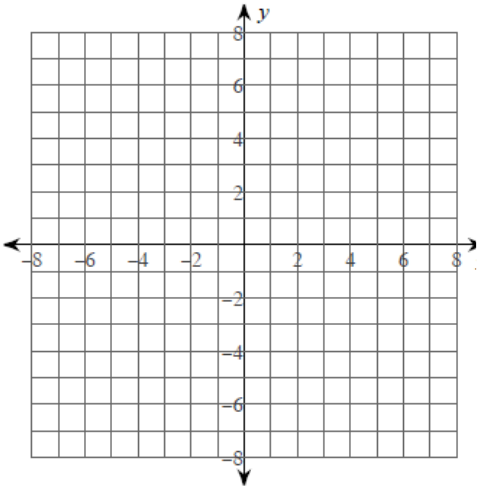
1. $y=(x+1)(x+3)$	2. $y=(x+3)(x-5)$
3. $y=(x-4)^2$	4. $y=-(x-4)(x+2)$

Graph each parabola, having found the vertex for them in #'s 1-4.

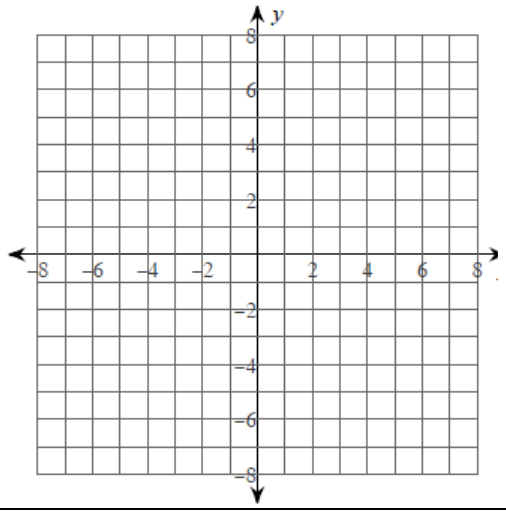
5. $y=(x+1)(x+3)$



6. $y=(x+3)(x-5)$



7. $y=(x-4)^2$



8. $y=-(x-4)(x+2)$