

Parts of a Parabola:

1. Describe what the axis of symmetry is?
2. The axis of symmetry is the same as what component of the vertex?
3. How do you find the y-intercept of a parabolic function?

Determine the axis of symmetry and the y-intercept for each.

1. $y = (x + 4)(x + 12)$

2. $y = 8(x - 5)(x + 9)$

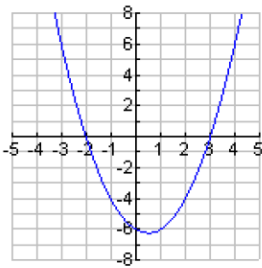
3. $y = (x - 7)(x - 1)$

4. $y = -0.5(x - 1)(x + 7)$

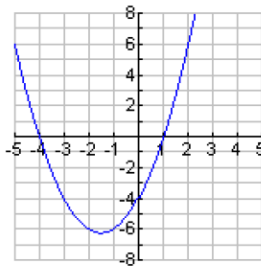
Connecting Graphs with their y-intercepts:

Match each equation to its graph.

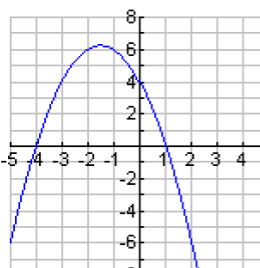
Graph A



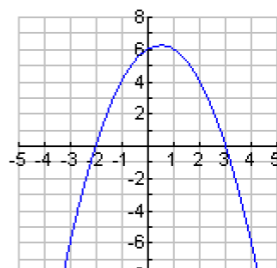
Graph B



Graph C



Graph D



1) y-intercept of 4

2) y-intercept of -6

3) y-intercept of 6

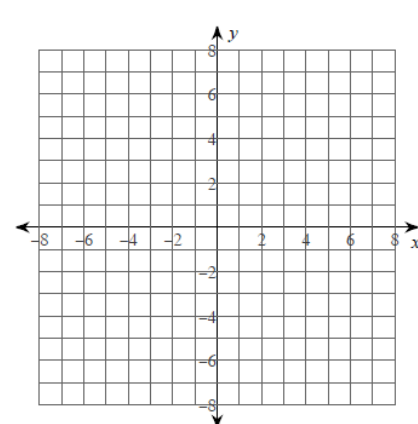
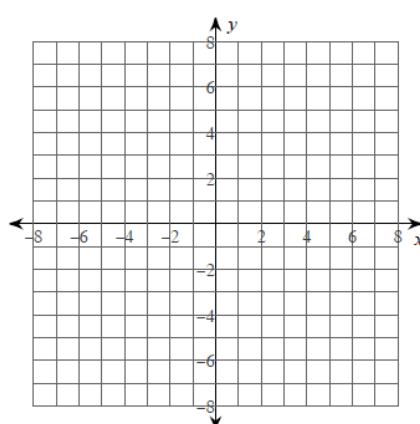
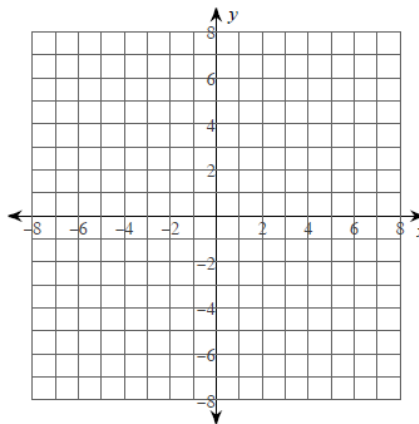
4) y-intercept of -4

Graph the following parabolas. Make sure that you draw the axis of symmetry and calculate and plot the y-intercept. (please do the calculations on a separate sheet of paper)

1. $f(x) = (x + 2)(x - 4)$

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

3. $f(x) = -(x + 2)(x + 2)$

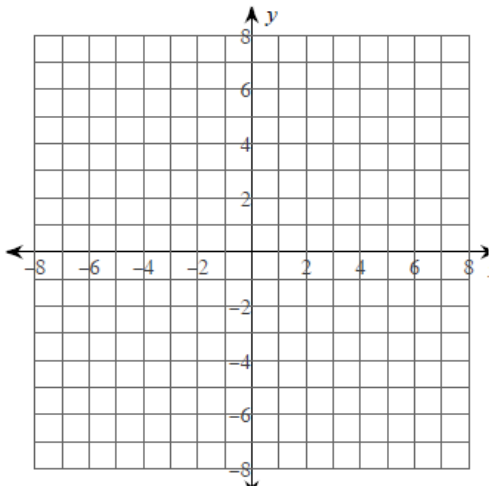
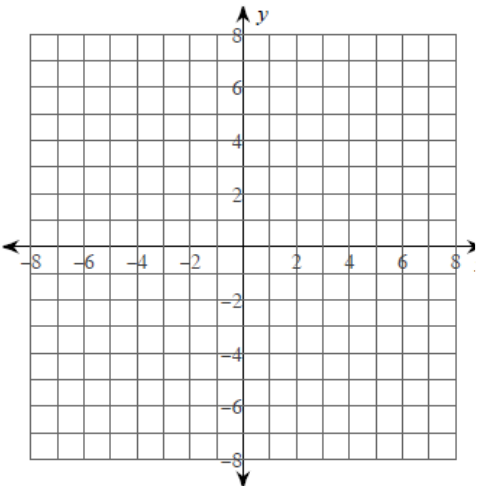


Summary Assignment Week 4

Determine the axis of symmetry and the y-intercept for each parabola.

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

Sketch a precise graph for each parabola. Please show all the important features on your sketched graph.

5. $y = (x+1)(x+5)$ 	6. $y = -(x+1)(x-1)$ 
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