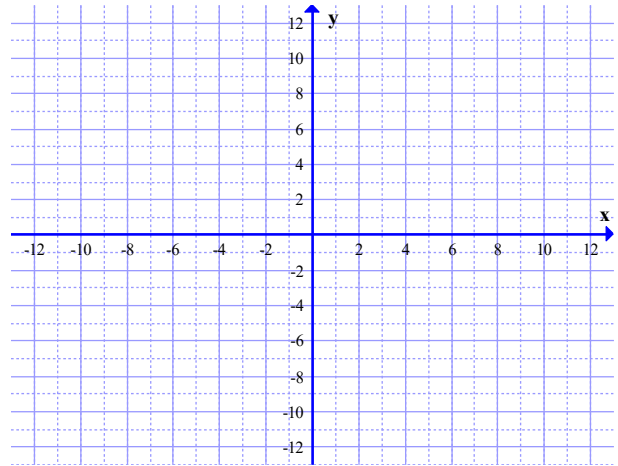
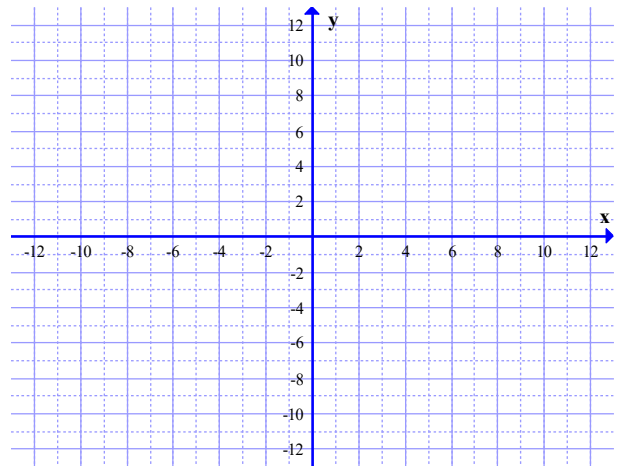


MAC1105 College Algebra  
4.1 Practice Problems

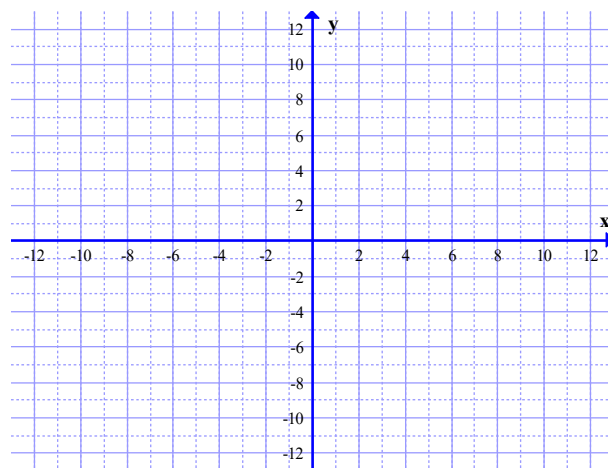
1. For the function  $g(x) = -2(x-3)^2 + 8$
- Find the vertex of the quadratic function.
  - Determine if the parabola opens up or down.
  - Determine the axis of symmetry.
  - Find the x and y intercepts of the function.
  - Graph the function.



2. For the function  $f(x) = -4x^2 - 16x - 12$
- Find the vertex of the quadratic function. (Use completing the square)
  - Determine if the parabola opens up or down.
  - Determine the axis of symmetry.
  - Find the x and y intercepts of the function.
  - Graph the function.



3. For the function  $f(x) = x^2 - 8x + 5$
- Find the vertex of the quadratic function.
  - Determine if the parabola opens up or down.
  - Determine the axis of symmetry.
  - Find the x and y intercepts of the function.
  - Graph the function.



4. Analyze the graph of a quadratic function given its graph.
- Is the leading coefficient positive or negative?
  - What is the value of h? What is the value of k?
  - What is the value of the leading coefficient a?
  - Write the equation in standard form.
  - Write the equation in general form.

