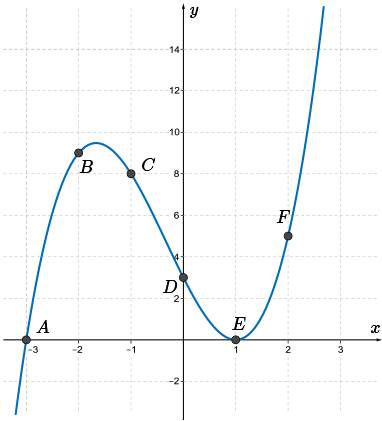
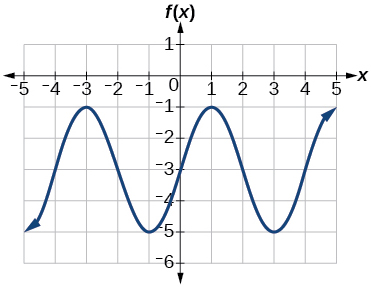
**A2 Unit 7 Review Sheet #1**

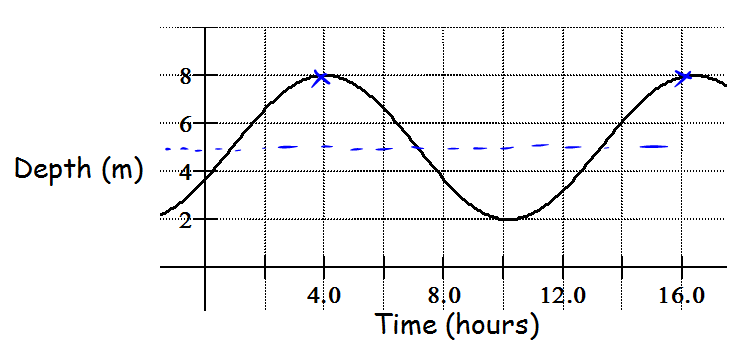
1. [](http://www.google.com/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0ahUKEwjOsZ6HrNfKAhUCaT4KHQS5D1AQjRwIBw&url=http://courseware.cemc.uwaterloo.ca/11/108/assignments/95&bvm=bv.113034660,d.cWw&psig=AFQjCNEf6mWtWLLDG9cPfGkD8YftdoqyBg&ust=1454442865318193)Write an equation for the graph shown. Show all work that leads to your answers.
2. Solve the system of equations shown:

[](https://www.google.com/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0ahUKEwjesubfrNfKAhWIMz4KHQyzDFAQjRwIBw&url=https://cnx.org/contents/ec87ee19-d627-4c06-89a0-2bd96aa3f402@6&bvm=bv.113034660,d.cWw&psig=AFQjCNFTGVIMCwWXEQUNLZ32nm0Cxj9Z5A&ust=1454443053474679)

1. Determine the equation for the function shown:
2. Write the following quadratic in vertex form. Determine the vertex of the function.
3. Determine if is a factor of (. Explain your reasoning.
4. Determine the cosine equation that has an amplitude of 4, frequency of 2, and a midline of 5.
5. Graph one cycle of each function on the same set of axes:

[](http://www.google.com/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0ahUKEwj89sfkr9fKAhULcD4KHf0VAFEQjRwIBw&url=http://mathbits.com/MathBits/StudentResources/GraphPaper/GraphPaper.htm&bvm=bv.113034660,d.cWw&psig=AFQjCNEbUALpbjWOGmYduHndJ0DN_9nLzA&ust=1454443868496996)

1. The depth of the water at a generating station can be represented by the graph shown:



* 1. Determine a possible function for this graph.
  2. Calculate the depth of the water at 9:30 am (assuming is midnight).
  3. Based on your graph, determine the amplitude, period and midline of the function
  4. Explain the meaning of the amplitude in context with this problem.