**A2 Unit 7 Review Sheet #1**

1. Write an equation for the graph shown. Show all work that leads to your answers.
2. Solve the system of equations shown:



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:



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.