**Module 9 Homework**

Complete the following problems and show all work. Make sure that you submit on eCampus in the Module 9 folder. These problems come from the 8th edition of the textbook.

* 7.4)
* 7.14) A child’s pool is eight feet in diameter and two feet high. It Is filled by a garden hose up to a level of one foot. The children complain that it is too cold. Can you heat it up to an acceptable temperature using hot water from the house? How much hot water would you need to add?
* 7.39) Landfill space is rapidly running out. Develop a plan to eliminate your city’s dependence on the local landfill. The city population is 1000,000.
* 7.58) Tom is from the census bureau and greets Mary at her door. They have the following conversation:

Tom: I need to know how old your three kids are.

Mary: The product of their ages is 36.

Tom: I still don’t know their ages.

Mary: The sum of their ages is the same as my house number.

* 12.4) Identify five product, structure, or system designs you think can be improved. Pick one that would be used in developing possible solutions to the problem. Provide specific examples.
* 12.5) Using an item from your list in exercise 12.4, develop a list of reference materials that would be used in developing possible solutions to the problem. Provide specific examples.