Week 4 Assessment:

1. What is the difference between a fixed and a moveable assembly in Onshape?

   A Fixed assembly is created using the Top-Down Design method in a Part Studio and is static, while a Moveable assembly is built in an Assembly tab using Mates and can be used to visualize motion.

2. What is so unique about the Mate Connector in Onshape?

   It is a single feature which allows for the full definition of all 6 degrees of freedom. It is the bases for how mates are defined.

3. How many degrees of freedom do the following Mates have:

   a. *Fastened - 0*
   b. *Revolute - 1*
   c. *Slider - 1*
   d. *Planar - 3*
   e. *Cylindrical - 2*
   f. *Ball - 3*

4. When a mate is initially defined, does Onshape solve the entire model, or just that mate?

   Just that mate.

5. What is a Relation? Provide 2 examples.

   It allows degrees of freedom to be defined between two existing mates. Examples are Gear, Rack & Pinion, Screw, and Linear.