# 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.*

1. 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.*

1. How many degrees of freedom do the following Mates have:
   1. *Fastened - 0*
   2. *Revolute - 1*
   3. *Slider - 1*
   4. *Planar - 3*
   5. *Cylindrical - 2*
   6. *Ball - 3*
2. When a mate is initially defined, does Onshape solve the entire model, or just that mate?

*Just that mate.*

1. 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.*