Week 3 Assessment:

1. What are the 3 types of Boolean Operations and how do they work? Feel free to draw pictures if they help.

    a. *Add/Union - A single Part is created from multiple, overlapping "Tools".*
    b. *Subtract - "Tools" are used to remove material from "Targets".*
    c. *Intersect - The overlapped volumes are created by multiple, overlapping "Tools"*

2. What is the main difference between a Linear and a Circular Part pattern?

    A Linear pattern creates parts along a straight linear reference, a circular pattern creates parts around an axis reference.

3. When might you use a Part Pattern versus a Feature Pattern?

    A Part Pattern patterns an individual part while a Feature Pattern patterns a specific feature (or features) listed in the Feature Tree, such as extrude, fillet, sweep, and sketch.

4. Describe in your own words what "Top-Down Design" means.

    Top-Down Design is when the shape of an overall product is sketched first, and then different regions of that sketch are used to create the lower level parts and their features.

5. Why is it smart to put fillets and chamfers at the end of the feature list?

    Because they are not critical features, and having them too early in the model, could result in accidentally referencing them while creating critical geometry.

6. How is the mirror tool being utilized in the creation of our Clamp design?

    We are using it to save time by only modeling half of our pins and hinges, and then mirroring them over the symmetry plane.