Topic: 4.2 Constructions I - Copying and Bisecting Segments

1. What does a ruler do?
2. What is a radius? Draw a circle and mark its radius.
3. What is a diameter? How does it relate to a radius?
4. What is a circumference? Label the circumference of your circle.
5. What tool can you use to draw a perfect circle? (Hint: Look right in front of you)
6. Take the compass in front of you and draw another circle.
   - Mark the radius of the circle and measure its length.
   - Place the tip of your compass on the center of the circle and set the end of the compass to the circumference.
   - Keeping the width of your compass the same, move to a different point and draw a new circle.
   - Draw and measure the radius of this circle. What do you notice?
7. Draw the line segment $\overline{AB}$ with a length of 5.
   - Set the center and the end of the compass to points A and B.
   - Move the center of the compass to a new point and draw an arc.
   - Draw and measure the radius of this circle. What do you notice about its length? Why is this the case?
8. Using what you've learned, describe how to copy a line segment.
9. Could you double or triple the size of a line segment with this method? Attempt it.