**Geometry Lesson 1-3: Students will construct a perpendicular bisector of a segment, explore parallel lines, and bisect an angle.**

**NOTES: Bisecting Angles and Segments**

**[1st] With your compass, construct**

**this image:**

**[2nd] If you connect B to C to D to E**

**to F to G to B, what shape will you get?**

**🡪Explain your response.**

**[3rd] What were important ideas from**

**yesterday’s lesson?**

**[4th] Does** $\vec{AD}$ **bisect / BAC? Explain**

**your reasoning.**

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**[5th] Does** $\vec{EH}$ **bisect / FEG? Explain**

**your reasoning.**

**(Circles F and G have the same**

**radius.)**

**\*What must happen for the ray**

**to bisect the angle?**

**Circles A and B have the same radius.**

**C and D are on both circles.**

**[6th] Is C closer to A or B? Explain.**

**[7th] Is D closer to A or B? Explain.**

**[8th] What do all points on** $\overbar{CD}$ **have**

**in common?**

**[9th] Create your own segment** $\overbar{AB} $

**and construct circles A and B so that**

**they have the same radius. Then connect**

**C and D.**

**[10th] Measure both parts of** $\overbar{AB}$ **and explain**

**what you notice. Also measure the angles**

**formed at the intersection of** $\overbar{AB}$ **and** $\overbar{CD}$**.**

**Explain what you notice.**

**[11th]** $\overbar{CD}$ **is called the \_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_ of** $\overbar{AB}.$

 **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Suppose you could copy and slide**

**/ BAC so that the copy moved up *Before***

**to have its vertex at B?**

**[12th] Explain how the higher and lower lines**

**are related? Explain your reasoning.**

**[13th] With your compass and straightedge,**

**recreate this construction of / BAC and**

**the copy angle: MAKE SURE your copy**

**has B as the vertex. *After***