**Geometry Lesson 1-6: Students will complete a justification for bisecting an angle and bisecting a segment.**

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**Geometry NOTES Understanding Bisectors Page 1-6**

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**[1st] Unscramble each [a] glean [b] gentmes**

**to make a vocabulary**

**term from geometry.**

**[2nd] How do Use / BAC as an example. B and C are \_\_\_\_\_\_\_\_\_\_\_\_\_\_ from**

 **equal distances A, so AB = AC. D is \_\_\_\_\_\_\_\_\_\_\_\_\_\_ from B and C, so BD = CD.**

 **with a compass Also, AD equals itself by the \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_.**

 **bisect an angle?**

 **This means /\ ABD** $\tilde{=}$ **\_\_\_\_\_\_: they are really versions of**

 **the same \_\_\_\_\_—and that means that corresponding angles**

 **/ BAD** $\tilde{=}$ **/ CAD. If these two angles are equal halves of**

 **/ BAC, then** $\vec{AD}$ **must be the \_\_\_\_\_ \_\_\_\_\_\_\_\_ of / BAC.**

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**[3rd] What are Create an obtuse angle. Label the vertex Q. Next, construct**

 **the steps to the angle bisector: 1st Construct circle Q so that it**

 **\_\_\_ \_ \_\_\_\_? intersects both sides of the angle. 2nd Label the two**

 **points, where circle Q intersects the angle sides, R and S.**

 **3rd Construct circles R and S so that S is on circle R and**

 **R is on circle S. 4th Where circles R and S intersect inside**

 **/ RQS, label the point of intersection T. 5th Construct**

$\vec{QT}$ **: this is the angle bisector of / RQS.**

 **\*YOU NEED TO DRAW THIS CONSTRUCTION.**

**[4th] What are Create a segment** $\overbar{JK}$**. Now construct its perpendicular**

**the steps for bisector: 1st Construct circles J and K so that they have**

**constructing the the same radius AND so that they intersect on both sides**

 **\_\_\_\_\_\_\_ \_\_\_\_\_\_ of** $\overbar{JK}$**. 2nd Connect the two points where the circles intersect.**

**of a segment? Label the two points of intersection L and M.** $\overbar{LM}$ **is the \_\_\_\_\_\_\_\_\_\_**

**Also, how do \_\_\_\_\_\_\_\_\_\_ of** $\overbar{JK}$**.**

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

**with a compass Because L and M are each equally distant from J and K, every point**

**bisect the on** $\overbar{LM}$ **is equidistant from endpoints J and K.**

**segment? \*\*YOU NEED TO DRAW THIS CONSTRUCTION.**

**[5th] REVIEW:**

**Explain step by step**

**how to copy an angle.**

**Also draw each step.**