

DO NOW – On the back of this packet

Name _____

LO: I can describe what a perpendicular bisector is, make one by folding, and can explain how the folding makes the perpendicular bisector.

(1) **Need to know**
angle diagrams

Perpendicular means _____

Bisect means _____

(2) **Folding Perpendicular Bisectors:**
segments strip

Use the segments on the paper strip of segments to complete each item below.

Part A: (1) Fold \overline{AB} so that point A and point B meet exactly – the dots should touch.

(2) Crease the paper on this fold.

(3) Use a ruler and pencil to draw the line made by the crease.

(4) Label the new line CD and draw arrows at its ends.

(5) Label the intersection of \overline{AB} and \overleftrightarrow{CD} with the letter E.

(6) Repeat steps 1 through 5 for \overline{FG} (label the new line HI and the point of intersection J),
 \overline{KL} (label the new line MN and the point of intersection O),
 \overline{PQ} (label the new line RS and the point of intersection T),
 \overline{UV} (label the new line WX and the point of intersection Y).

Part B: Write the pair of segments that are congruent for each diagram.

\overline{AB} : _____ \cong _____ \overline{FG} : _____ \cong _____ \overline{KL} : _____ \cong _____ \overline{PQ} : _____ \cong _____ \overline{UV} : _____ \cong _____

Part C: How do you know that the segments you listed above are congruent?

Part D: Based on what you found in parts A-C, points E, J, O, T, and Y are _____
and \overleftrightarrow{CD} , \overleftrightarrow{HI} , \overleftrightarrow{MN} , \overleftrightarrow{RS} , and \overleftrightarrow{WX} are _____.

Part E: You described one relationship in the diagrams. There is another relationship in the diagrams.

What do you think it is? _____

We know this because $\angle AEB$ is a _____ angle which means its measure is _____. AND, when we folded so that point A and point B coincide, we bisected the angle like we did in lesson 1.3. So, the measure of $\angle AEB$ is _____ and when we folded $\angle AEB$, we _____ it. That means $\angle AEC$ must be half of _____ which is _____ and when lines intersect at _____ they are _____.

(3) **Exit Ticket**

Describe how to fold a segment to make a perpendicular bisector. Include all the information about how we know that the segment is bisected by the crease and how we know that the segment is perpendicular to the crease.

 (4) **HOMEWORK:**

compass
highlighters

(1) Define and draw what each term means. Use your notes.

Bisect means: _____ it looks like:

Congruent means: _____ we show it with the symbol _____

it looks like: (one for angles, one for segments)

Perpendicular means: _____ it looks like:

Obtuse angle means: _____ it looks like:

Acute angle means: _____ it looks like:

Right angle means: _____ it looks like:

Straight angle means: _____ it looks like:

(5)
cont.
compass

Homework

(2) Construct equilateral triangles ABC and DBE. Since "B" appears in both triangle names, B will have to be a vertex (corner) in both triangles.

(3) Look at your construction in part 2. In your diagram, is there a straight line segment AD or AE? If not, how could you redo your construction to ensure that there is? (describe or reconstruct). If you do have segment AD or AE, how could you redo your construction to have the other segment – meaning, if you had AD, what could you change to have AE or vice versa?

(5) **Homework**
cont.
compass

(2) Construct a large equilateral triangle in the space below. Then, bisect one of the angles of the triangle.

Exit Ticket **Name** _____ **Date** _____ **Per** _____

8.4L

(1) The LO (Learning Outcomes) are written below your name on the front of this packet. Demonstrate your achievement of these outcomes by doing the following:

Describe how to fold a segment to make a perpendicular bisector. Include all the information about how we know that the segment is bisected by the crease and how we know that the segment is perpendicular to the crease.

DO NOW Name _____ Date _____ Per _____

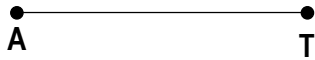
(1) Use your notes to sketch and describe

(a) perpendicular lines

(b) bisector

(2) Is point R equidistant from both A and T? Justify and explain your conclusion. (hint: What tools might you use?)

R



(3) Describe why the cartoon below is supposed to make people smile. REALLY think about it.

