Geometry Regents Lomac 2015-2016 **Date** 9/28 **due** 9/29 **Points of Concurrency: Incenters and Circumcenters** **1.8R**

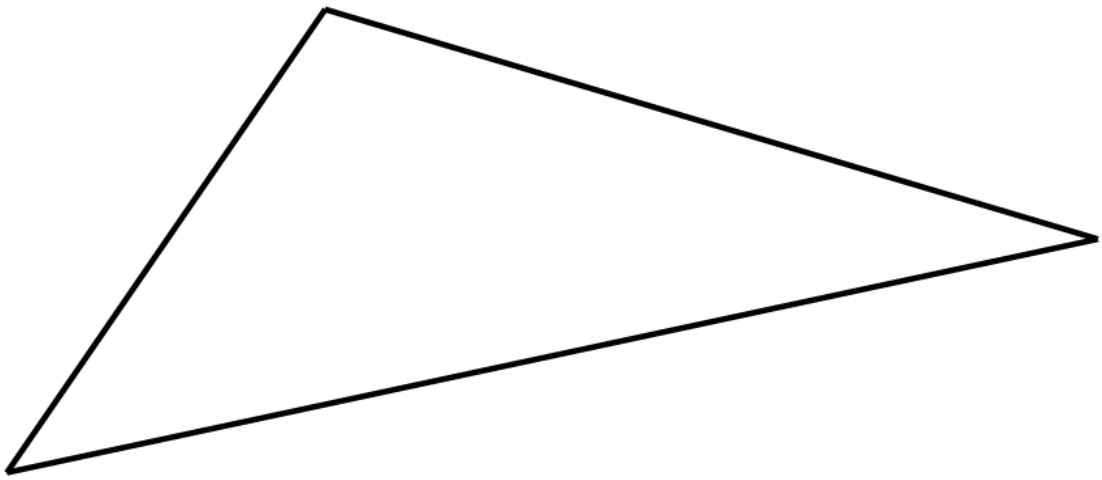
☐ **DO NOW –** On the back of this packet

Name _____

LO: I can construct incenters and circumcenters for triangles by constructing angle bisectors and perpendicular bisectors.

☐ (1) compass **Constructing a point of concurrency: The** _____

☐ Construct 3 perpendicular bisectors, one for each side of the triangle. Use a different color for each construction.

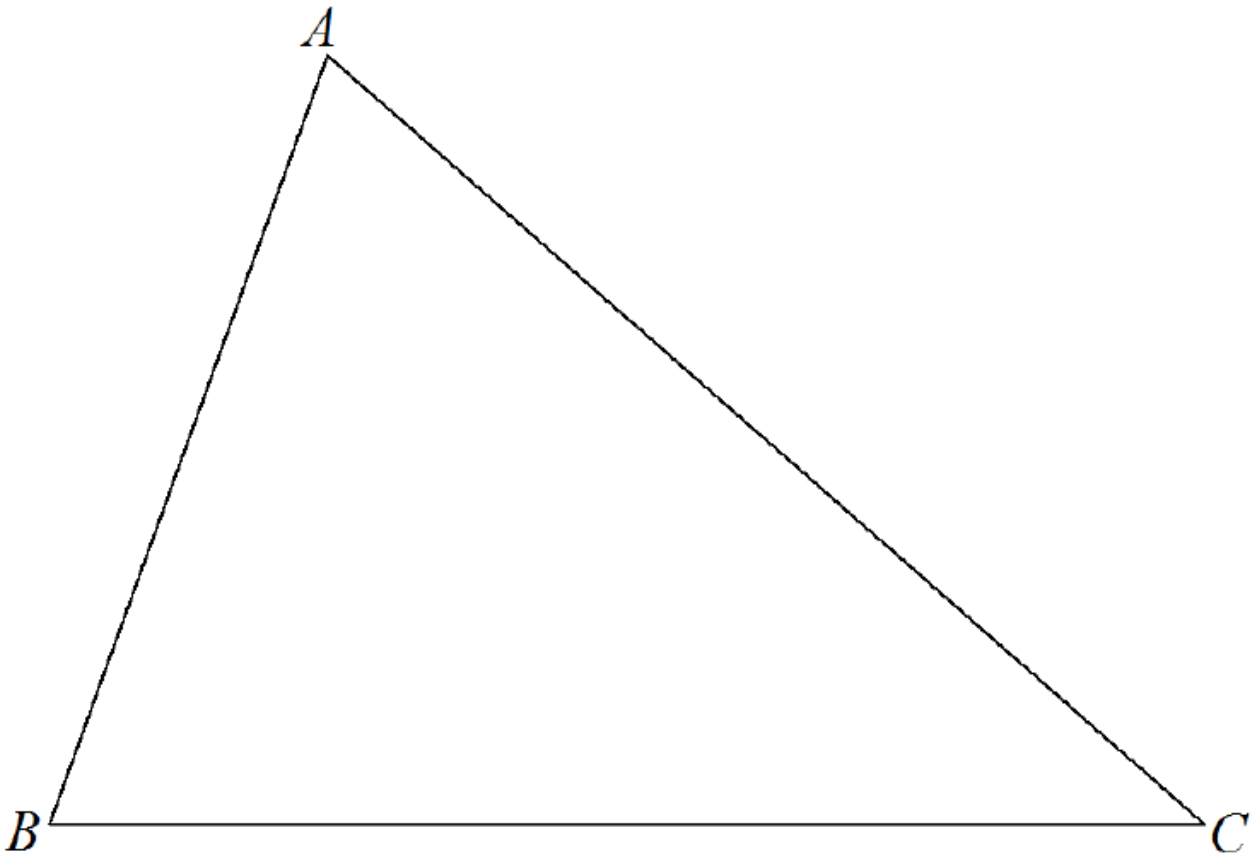


The three perpendicular bisectors should meet in one point called a **point of concurrency**. If they don't intersect, make them longer until they do. Put the point of your compass on the point of concurrency and the pencil of your compass on one vertex of the triangle. Once your compass is set, make a circle. Did it pass through each vertex of the triangle? If it did, you found the point of **concurrency** called the **circumcenter** because the triangle is **circumscribed** by this circle.

☐ (2) compass highlighters

Constructing a point of concurrency: The _____

Construct 3 angle bisectors, one for each angle of the triangle. Use a different color for each angle bisector.



The three angle bisectors should meet in one point called a **point of concurrency**. If they don't intersect, make them longer until they do. Put the point of your compass on the point of concurrency and the pencil of your compass on the dot on segment BC. Once your compass is set, make a circle. Did it barely touch each side of the triangle? If it did, you found the point of **concurrency** called the **incenter** because the circle is **inscribed** inside this triangle.

☐ (3) **Exit Ticket**

ON THE LAST PAGE

☐ (4) **Homework**

cont. compass

☐ (1) DRAW:

a) Q is the midpoint of $\overline{PC}$

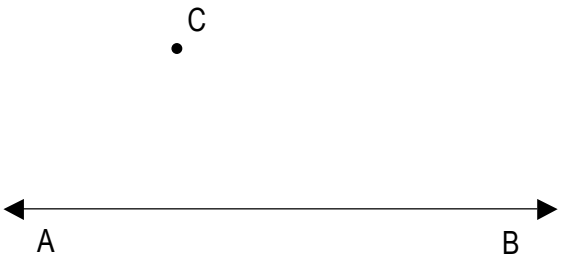
b) $\overrightarrow{TR} \perp \overleftrightarrow{HL}$

c) $\angle CDE$ is bisected by $\overrightarrow{DZ}$

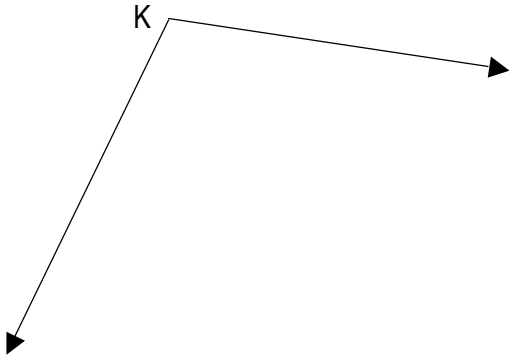
d) scalene triangle OWU

(2) CONSTRUCT:

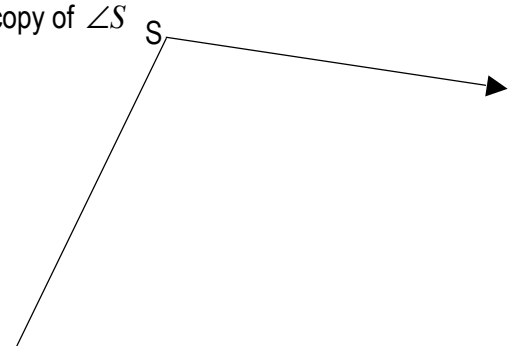
a) the line perpendicular to $\overleftrightarrow{AB}$ through point C



b) the bisector of $\angle K$



c) a copy of $\angle S$



☐ (4) cont. **Homework**

TEST CHECKLIST

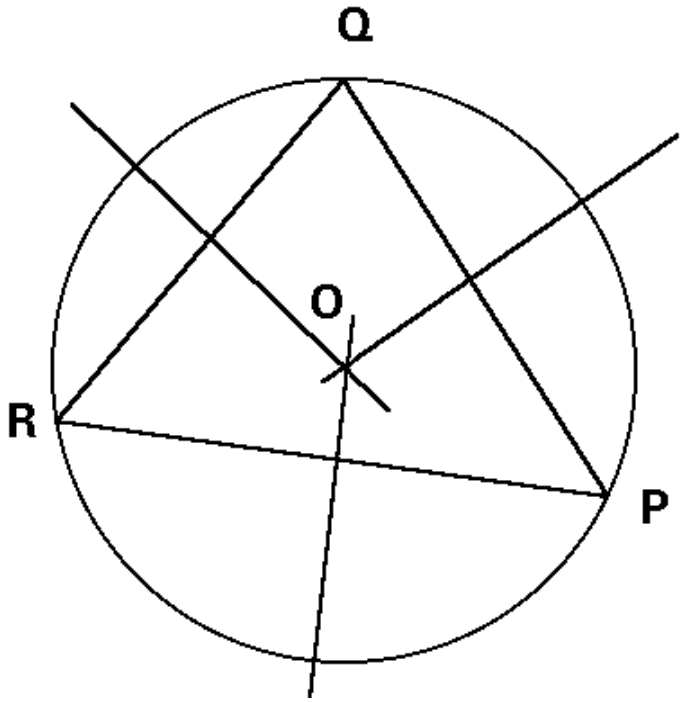
To be fully prepared for the Unit 1 test I have done the following (check all that apply)

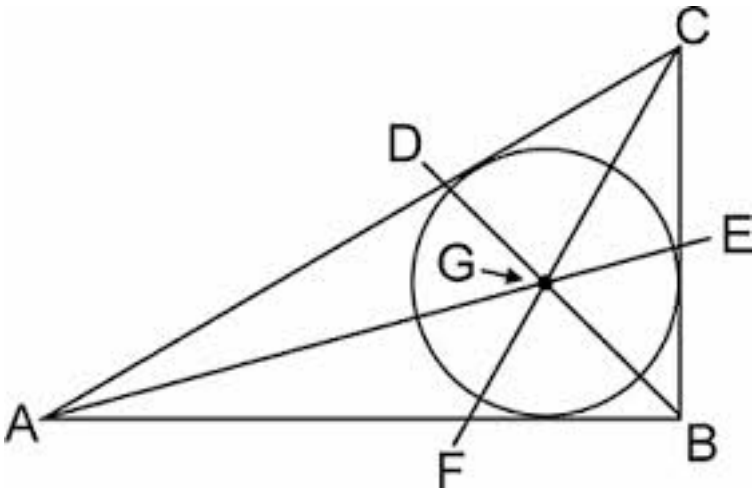
- ☐ bought a compass
- ☐ completed lesson 1.1
- ☐ completed lesson 1.1b
- ☐ completed lesson 1.2
- ☐ completed lesson 1.3
- ☐ completed lesson 1.4
- ☐ completed lesson 1.5
- ☐ completed lesson 1.6
- ☐ completed lesson 1.7
- ☐ done homework for lesson 1.1
- ☐ done homework for lesson 1.1b
- ☐ done homework for lesson 1.2
- ☐ done homework for lesson 1.3
- ☐ done homework for lesson 1.4
- ☐ done homework for lesson 1.5
- ☐ done homework for lesson 1.6
- ☐ done homework for lesson 1.7
- ☐ got help from a friend with _____
- ☐ got help after school from Ms. Lomac with _____
- ☐ used my notes as flashcards for at least 5 minutes a day 5 days a week
- ☐ can independently demonstrate the SLO'S (learning outcomes) for each lesson

Exit Ticket Name_____ Date _____ _____ Per_ _____ 1.8R

(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:

In the diagrams below, there is one incenter and one circumcenter. First, name the point that is an incenter, and describe in a sentence or two how it is constructed. Second, name the point that is a circumcenter, then describe in a sentence or two how it is constructed.





DO NOW **Name**_____ **Date** _____ **Per**_____ **1.8R**

(1) Draw a line segment and construct the perpendicular bisector of the segment

(2) Draw an angle and construct the bisector of the angle.

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