Geometry Regents Lomac 2015-2016   Date 9/18   due 9/19   **Constructing Regular Hexagons** | **1.2R**

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

Name _____

LO: I can construct regular hexagon and explain how the constructions guarantees a regular hexagon.

☐ (1)
pen/pencil

Regular Hexagon

Regular means that all sides of a figure are _____ and all angles of a shape are _____

Hexagon is a polygon with _____ sides

☐ (2)

notes page, diagrams and scissors, tape or glue

Notes:

☐ (a) Obtain "C2 Regular Hexagon" (the back of C1), a diagrams page, scissors, and tape or glue

☐ (b) Cut out the column of diagrams and match them with the step descriptions on the construction notes page
As you arrange the diagrams, to match the steps, use the steps and notes to construct regular hexagon in the space below. It will help if you start your construction in the center of this space and use a radius no larger than this: _____

☐ (c) Fill out column 3, "What this does (justification)" for as many steps as you can.
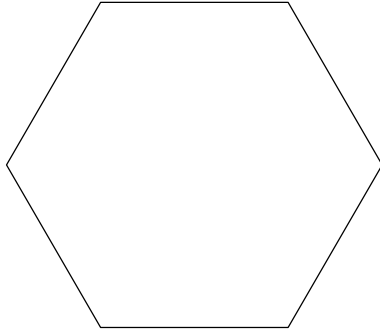
□ (3) **Exit Ticket**

ON THE LAST PAGE

□ (4) **Homework**

compass

(1) A Regular Hexagon?

Use the process for constructing a regular hexagon to determine whether or not the hexagon below is a regular hexagon. Since no center is marked, you will want to start at a corner (vertex) of the hexagon.

I know that this is/is not (choose one) a regular hexagon because: _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

(2) Below is one of the diagrams from the notes. We know all of the sides of the hexagon are equal because all of our circles were constructed with the same radius.

(a) Use the diagram to draw a regular hexagon and then show that the hexagon is made up of 6 equilateral triangles.

(b) Each angle of an equilateral triangle is _____ degrees. Describe how this helps us know that all of the angles of the hexagon are equal.
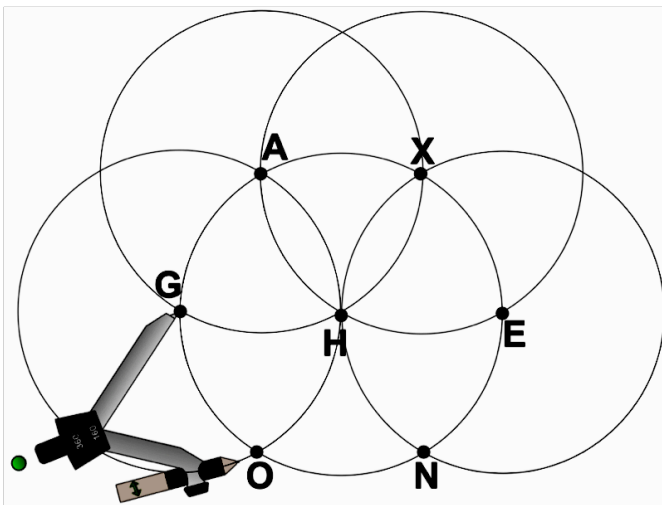
Exit Ticket   **Name**_____ **Date** _____ _____ **Per_** _____   **1.2R**

Exit Ticket

(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:

Regular Hexagon

Use a compass and straightedge to construct a regular hexagon.

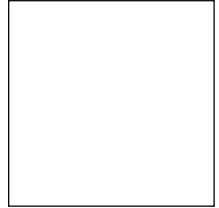Use the length of a long side of the rectangle at right for the sides of the hexagon.

It will help if you start your construction in the center of this space. If your circles go into the directions, that's ok.

Leave all construction marks.

DO NOW   **Name**_____ **Date** _____ **Per**_____   **1.2R**

(1) Construct equilateral triangle QRS with side lengths equal to the length of the diagonal of the square below.

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

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PENTAGON   HEXAGON   OREGON