Name: _____   **Date:** _____
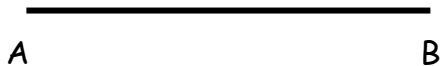**CC Geometry (H)**

Constructing an Equilateral Triangle and Regular Hexagon Homework

1. Copy segment AB below

_____

A   B

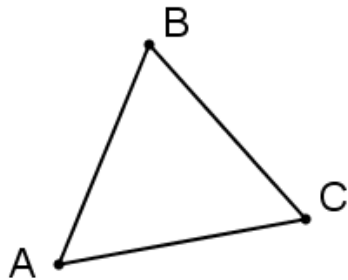2. Construct an equilateral triangle with sides congruent to the given line segment

_____

3. Construct a regular hexagon

4. △ ABC is shown below. Is it an equilateral triangle? Justify your response.

5. You need a compass and straightedge.

Cedar City boasts two city parks and is in the process of designing a third. The planning committee would like all three parks to be equidistant from one another to better serve the community. A sketch of the city appears below, with the centers of the existing parks labeled as P_1 and P_2. Identify two possible locations for the third park, and label them as P_{3a} and P_{3b} on the map. Clearly and precisely list the mathematical steps used to determine each of the two potential locations.

Residential area

Elementary School

● P_1

High School

Light commercial
(grocery, drugstore,
dry cleaners, etc.)

Library

● P_2

Residential area

Industrial area