Constructing an equilateral triangle.
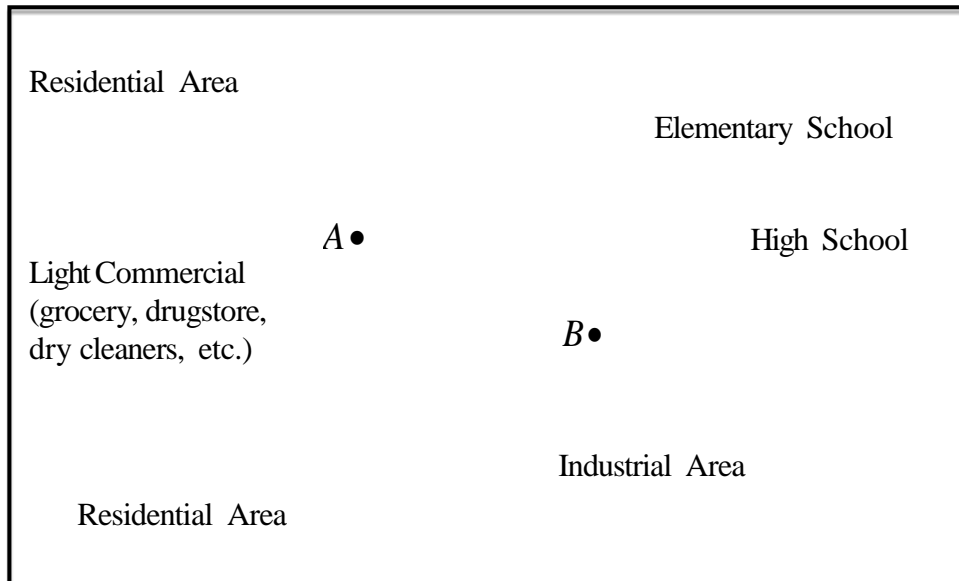
A •————————————• B
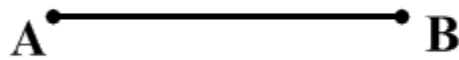
Example 1: Construct an equilateral triangle with each of the given lengths.

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Example 2: Margie has three cats. She has heard that cats in a room position themselves at an equal distance from one another and wants to test that theory. Margie notices that Simon, her tabby cat, in the center of her bed (at S), while JoJo, her Siamese, is lying on her desk chair (at J). If the theory is true, where will she find Mack, her calico cat? Use the scale drawing of Margie's room shown below, along with the compass, and place an M where Mack will be if the theory is true.
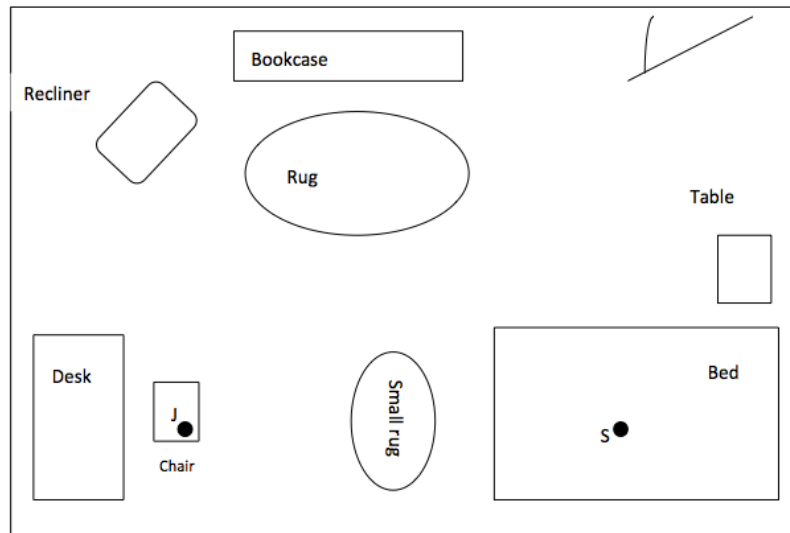
Example 3: A city would like to build a new park. The committee would like all three parks to be equidistant from one another to better serve the community. A sketch of the city appears below, with the centers of the existing parks labeled as A and B. *Where would the city be able to build their new park?*

Residential Area

Elementary School

$A \bullet$ High School

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

$B \bullet$

Industrial Area

Residential Area

Example 4:
Determine if triangle ABC is equilateral. **Justify your answer**.