Construction of a Kite

Brandon Stuhr (Refereed by Hailey Manternach)

April 29, 2015

Theorem 2.3. Give a construction of a kite.

Proof. Create points A and B. Make a circle centered at point A that has a radius the length of the line segment from A to B. Plot a new point D somewhere on the outside of circle A that would not cause the points A, B, and D to be collinear. Construct congruent circles around points B and D such that their radii are larger than the radius of circle A. Create point C where circles B and D intersect each other. Create line segments to make a kite ABCD. We know that ABCD is a kite because segments AB and AD are both radii of circle A, and segments CB and CD are radii of congruent circles. Therefore ABCD has two sets of adjacent congruent sides, creating a kite.

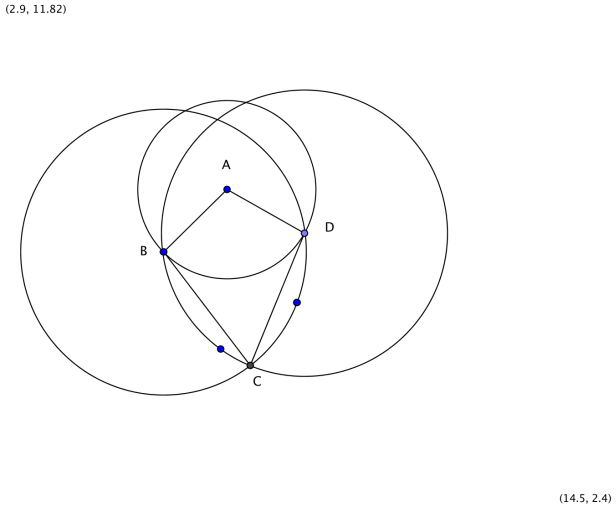

Figure 1: An image of the construction of a kite.

□