Arbitrary Rhombus Construction

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Theorem . One can construct a rhombus given an angle and line segment.

Proof. Let there be a given angle Z and line segment AB. Using the Expensive Jasmine Tea theorem, we know we can place segment AB at the base of angle Z. We will do so such that point A of Segment AB is on the vertex of angle Z. Draw circle AB and circle BA. if necessary extend the ray of angle Z that is not the base until it intersects with circle AB. Label the intersection point C. Draw circle CA and label the intersection of circle CA and circle BA as point D. ABDC will construct a rhombus because segments AB, BD, DC, and CA are all the radii of congruent circles.

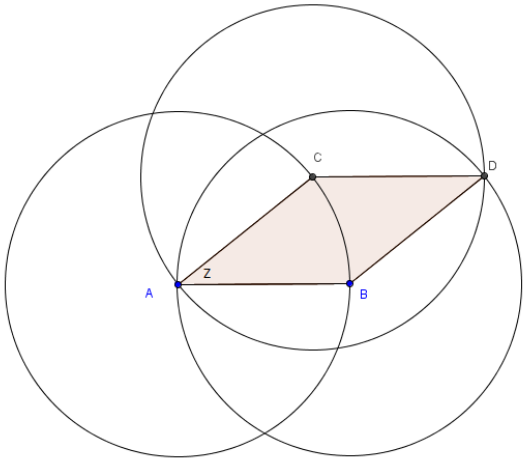

Figure 1:

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Refereed by Ms. Emily Jacobs and Ms. Ange Rhenstrom