## Cyclic Quadrilateral

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## **Theorem 9.3.** A rectangle is always a cyclic quadrilateral.

*Proof.* Let R be a rectangle and A, B, C, and D be its vertices's. By Ms. Freking's Theorem, we know that the diagonals of a rectangle are congruent and bisect each other. Since that is proved, we can say that E is the midpoint of these two diagonals intersecting each other. Then we draw a circle with the center, E, through the points A, B, C, and D. Thus, we can conclude that a rectangle is a cyclic quadrilateral.

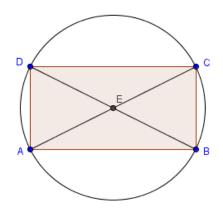


Figure 1: Cyclic Quadrilateral