**Activity 3.1.3b Proving the Quadrilateral Sum Theorem**



**Quadrilateral Sum Theorem:** The sum of the interior angle measures in any quadrilateral is 360°.

Given: *ABCD* is a quadrilateral

Prove: $m∠A+m∠B+m∠C+m∠D=360°$

Draw diagonal $\overbar{AC}$. We can do this because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.



Now complete the proof using your knowledge of the triangle angle sum theorem and the above diagram to assist you.