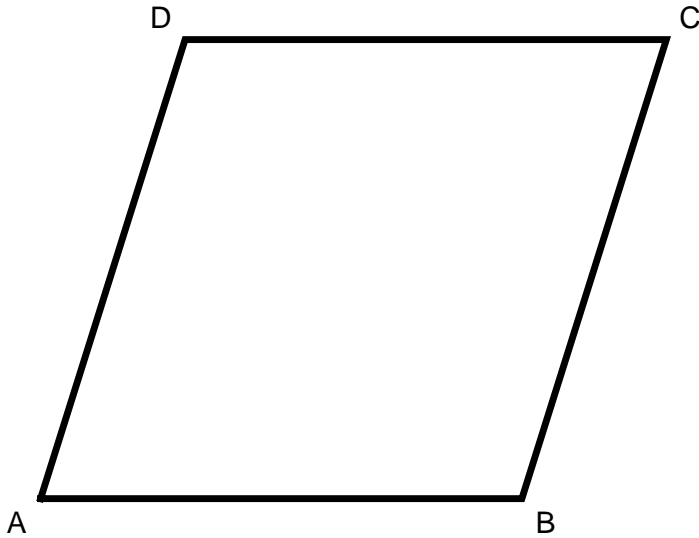


## Worksheet 7.2: Properties of Special Parallelograms I

**Purpose:** To discover properties of rectangles, rhombuses, and squares

1. Look at the rhombus below. Carefully construct the diagonals of the rhombus. What appears to be true about  $\angle ADB$  and  $\angle CDB$ ? What about  $\angle DCA$  and  $\angle BCA$ ? Make a conjecture about the diagonals of a rhombus and the angles of the rhombus. How can you use your compass to test your hypothesis? Can you prove your hypothesis? Try the proof below.



2. What appears to be true about the diagonals in relation to each other? State a conjecture about the diagonals. Can you use your compass to test your hypothesis? Can you prove your hypothesis? Give it a try below.

3. Carefully construct the diagonals of rectangle ABCD. What appears to be true about the diagonals? Write a conjecture about the diagonals of a rectangle. Prove your conjecture below.



4. Since a square is also a rhombus and a rectangle a square will have all the properties that a rhombus and a rectangle possess. Write the properties of a square in the space below.