Problem 1 – Properties of Rhombi

You will begin this activity by looking at angle properties of rhombi. Open the *Cabri Jr.* application by pressing APPS and selecting **CabriJr**. Open the file **READ1** by pressing Y=, selecting **Open…**, and selecting the file. You are given rhombus *READ* and the measure of angles *R*, *E*, *A*, and *D*.

1. Move point *E* to four different positions. Record the measures of angles *R*, *E*, *A*, and *D* in the table below.

Position	∠*R*	∠*E*	∠*A*	∠*D*
1				
2				
3				
4				

2. Consecutive angles of a rhombus are _____.

3. Opposite angles of a rhombus are _____.

Next, you will look at the properties of the angles created by the diagonals of a rhombus. Open the file **READ2**. You are given rhombus *READ* and the measure of angles *ESR*, *ASE*, *RSD*, and *ASD*.

4. Move point *E* to four different positions. Angles formed by the intersection of the two diagonals of a rhombus are _____.

Open the file **READ3**. You are given rhombus *READ* and the measure of all angles created by the diagonals of the rhombus.

5. Move point *E* to four different positions. The diagonals of a rhombus _____ the vertices of the rhombus.

Problem 2 – Properties of Kites

You will begin this problem by looking at angle properties of kites. Open the file **KING1**. You are given kite *KING* and the measure of angles *K*, *I*, *N*, and G.

6. Move point *I* to two different positions and point *K* to two different positions. Record the measures of angles *K*, *I*, *N*, and *G* in the table below.

Position	∠*K*	∠*I*	∠*N*	∠*G*
1				
2				
3				
4				

7. What do you notice about the opposite angles of a kite?

Next, you will look at the properties of the angles created by the diagonals of a kite. Open the file **KING2**. You are given kite *KING* and the measure of angles *ISK*, *GSN*, *ISN*, and *GSK*.

8. Move point *I* to four different positions. Angles formed by the intersection of the two diagonals of a kite are _____.

Open the file **KING3**. You are given kite *KING* and the measure of all angles created by the diagonals of the kite.

9. Move point *I* to four different positions. What do you notice about the angles created by the diagonals of a kite?

Problem 3 – Properties of Trapezoids

In this problem, you will look at angle properties of trapezoids. Open the file **TRAP**. You are given trapezoid *TRAP* and the measure of angles *T*, *R*, *A*, and *P*.

10. Move point *R* to four different positions. Record the measures of angles *T*, *R*, *A*, and *P* in the table below.

Position	∠*T*	∠*R*	∠*A*	∠*P*
1				
2				
3				
4				

11. What do you notice about the angles of a trapezoid?