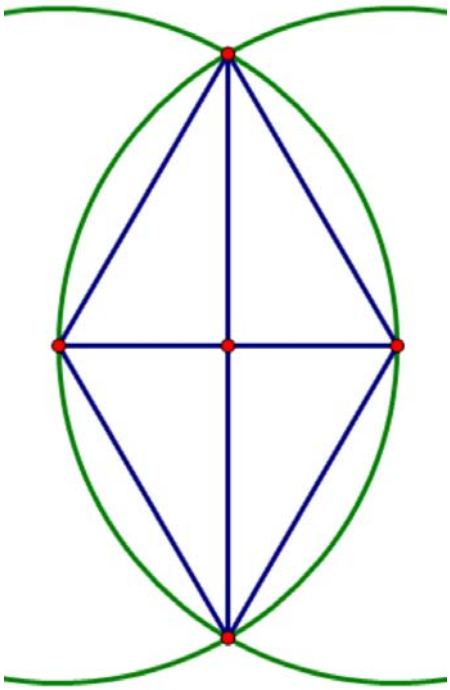
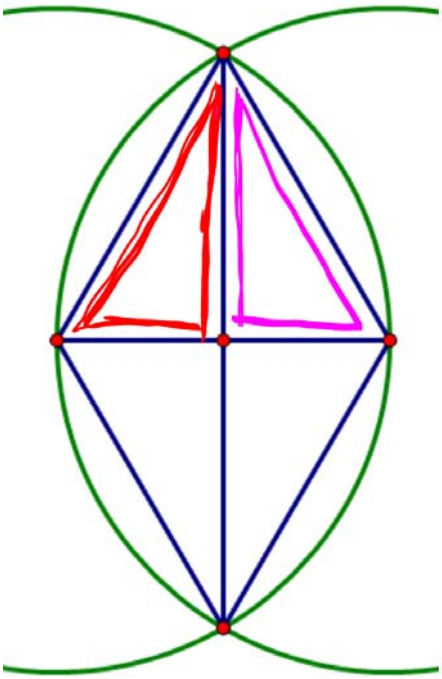
Two more hints for theorem 17 part 1.

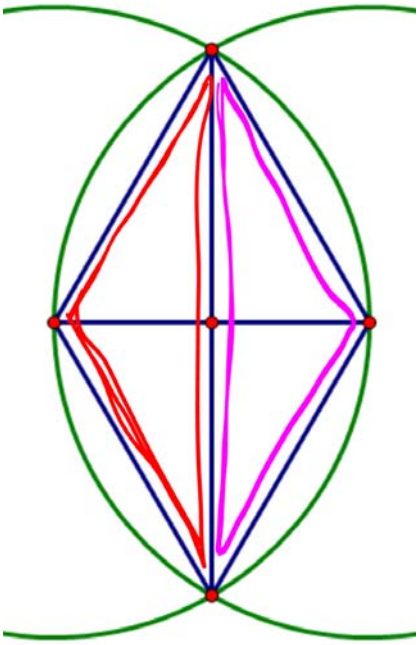
a. Hopefully, you have this diagram, and you have named all of the points in this diagram:



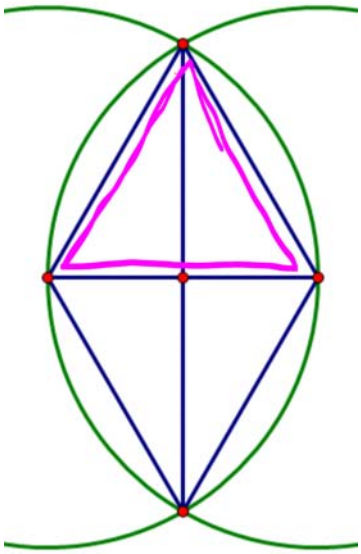
b. A big goal is to prove that these two triangles are congruent:



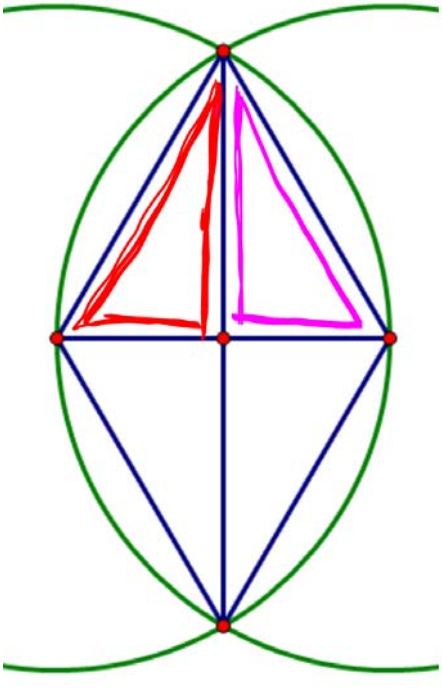
c. To do that it will be helpful to prove that these two triangles are congruent



d. And it will be useful to know that this triangle is isosceles:



e. You should be able to get a pair of useful congruent angles from c, and another pair from d, and you should have two congruent sides already, and you should be able to use ASA to say that these are congruent



You should be able to use the congruent triangles from e to:

- show that the point you think is a midpoint really is a midpoint
- show that the angles you think are right angles really are right because they add up to 180 and are congruent.