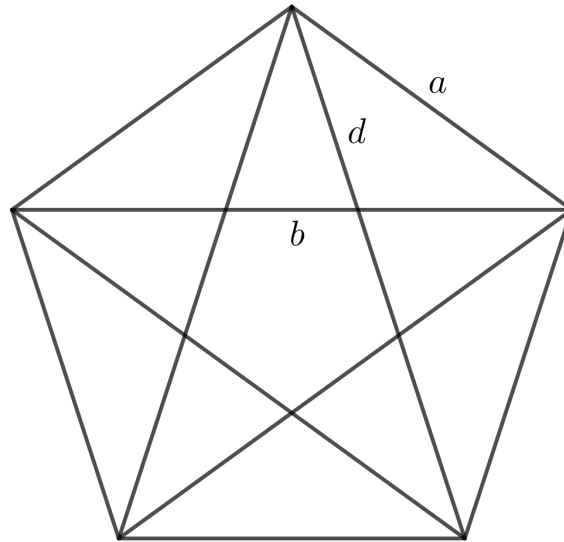# Problem of the Week #7

(Spring 2018)

When you draw straight line segments joining all vertices of a regular pentagon P, you make a smaller regular pentagon Q inside. If P has sides of length a and Q has sides of length b, show that the distance d from a vertex of P to the nearest vertices of Q is $\sqrt{ab}$.

[Please fully explain your answer.]

Solutions should be submitted to Cinda Furry, in Gardner Hall 435, by 4:00 P.M. on Wednesday, March 14, 2018.