

Problem 7: Perpendicular Bisectors

Rectangles $ABDE$, $BCFG$, and $CAHI$ are erected outwardly on the sides of a triangle ABC . Show that the perpendicular bisectors of the segments HE , DG and FI are concurrent (i.e., they intersect at a point).

(Hint: You may use the result of the previous problem of the week).

As always, show your work, fully explain and justify your answer. A solution mainly obtained by computers or calculators will not be accepted.

Posting Date 11/28/2021. Submit solutions to Noah Aydin, Mathematics Department, RBH 319 by e-mail or hard-copy by 4 pm on Friday, December 10, 2021. An email submission must be a single pdf file. Hard copy submissions must be dropped in the file holder at my office door (Hayes 319) and must include a time stamp.