

Problem 4: Triangles in a Trapezoid

Let X be the intersection of the diagonals of the trapezoid $ABCD$ with parallel sides AB and CD . Show that the areas of triangles AXD and BXC are the same.

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 9/26/2020. Submit solutions to Noah Aydin, Mathematics Department, RBH 319 by e-mail or hard-copy by 4 pm on Oct 9, 2020. 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.