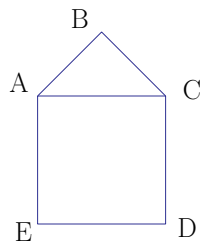


Challenge of the Week

Challenge of the Week # 8 - October 23 to October 30, 2009

In the following figure, $AB = BC = \sqrt{2}$ and $\angle ABC$ is a right angle. Further $ACDE$ is a square. Show how to draw lines in this figure in such a way that the lines divide the figure into at most six pieces which can be rearranged into a square.



Direct any questions concerning this week's challenge to Kamlesh Parwani, OM 3351

Rules and Awards

- Any undergraduate currently enrolled at EIU is eligible to participate.
- Each solution is to be the work of one individual and is to be submitted with the solver's name, year in school, email address, local address and home address.
- Each solution is to be written or typed and is due in the main Mathematics Department office (OM3611) by 2:00 p. m., Friday, October 30.
- Entries will be graded on the basis of clarity of exposition and elegance of solution.
- An award of \$20 will be given for the best solution. In the case of a two-way tie, the award will be split. If there are more than two 'best' solutions, a drawing will be held for the award. In case no award is made for this week's challenge, \$20 will be added to the next week's award.
- Names of all solvers will be posted on the Challenge of the Week bulletin board and on the Challenge of the Week homepage: <http://www.ux1.eiu.edu/~dmbroline/chalweek/index.html>