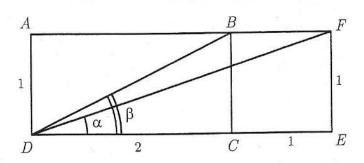
$\begin{array}{c} {\rm MAT~106} \\ {\rm Optional~Bonus~Problem} \end{array}$

 $\underline{\text{Extra Credit}}$: This problem is due on Friday, November 15 and is worth 5 bonus points towards the homework assignment to be collected on that date.

Points will be awarded based on correctness, not completeness. Partial credit for incorrect or incomplete work will be awarded sparingly (if at all).

• Consider the rectangle pictured below. Note that the length of side AB is twice the length of side AD.



Your mission: find $\alpha + \beta$.