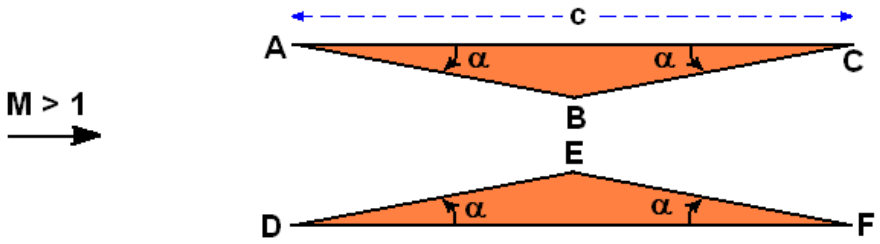
Problem 340E

The following biplane arrangement is deployed in a supersonic stream of Mach number, M:



The oncoming stream is parallel with the sides AC and DF. The flow is to be analyzed using the supersonic theory for small angles of turn. If the angles $\hat{BDF}$ and $\hat{EAC}$ are both equal to the Mach angle, $\mu = \arcsin(1/M)$, find the drag coefficient for the foils.