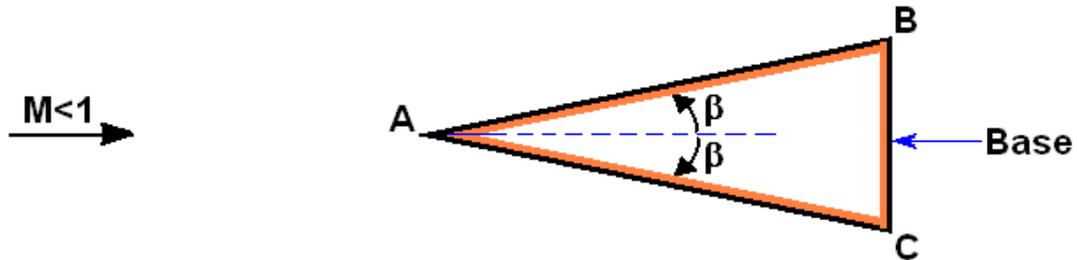## Problem 345A

Find the drag coefficient, C_D, for a slender two-dimensional wedge placed symmetrically in a subsonic, inviscid uniform stream of Mach number, M:

The half-angle at the vertex of the wedge is denoted by β and is small. It is assumed that the magnitude of the velocity on the sides of the wedge has the form $q = Cs^m$ where C is a constant, s is a coordinate measured from the front stagnation point, A, and $\beta = \pi m/(m+1)$. Further, it is assumed that the pressure acting on the base of the wedge and at the side points, B and C, where the flow separates is the same as in the upstream flow.