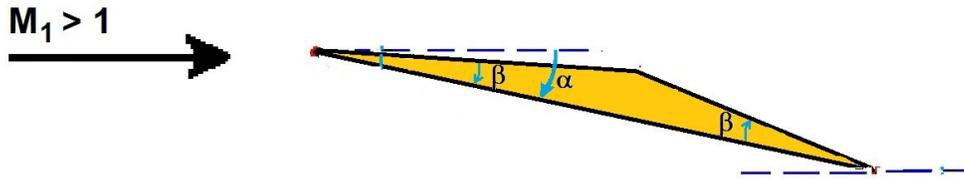


### Problem 340C

Using supersonic flow theory for small angles of turn find the lift and drag coefficients for supersonic flow past a thin airfoil of the following shape:



The answers should be given in terms of the Mach number,  $M$ , the angle of attack,  $\alpha$ , and the angle,  $\beta$ . Comment briefly on the effect of airfoil thickness (as given by  $\beta$ ) on the performance of the foil. For a fixed  $\beta$  at what angle of attack will the lift/drag ratio be a maximum?