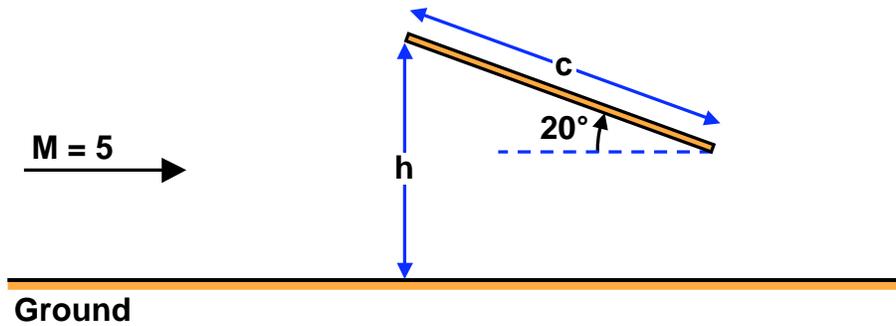


Problem 354C

A thin flat plate airfoil at an angle of attack of 20° is close to the ground and encounters an oncoming airstream with a Mach number of 5. The leading edge of the foil is a distance, h , from the ground and the chord length of the foil is denoted by c :



Determine the smallest value of the ratio h/c for which the lift and drag on the airfoil will not be affected by the presence of the ground. [Do not use the supersonic flow theory for small angles of turn.]