

King Fahd University of Petroleum and Minerals

Aerospace Engineering Department

AE 450 – Computational Methods in AE

Assignment # 3(Due Date: 18/03/2007)

The problem to be considered is shown schematically in the Figure below. Model flow into a flat line which simulates the "face," i.e. the two-dimensional slot which serves as the suction inlet to a hood, a vacuum cleaner, or some other suction device. The flow comes from all over, i.e., from "infinity." Because of symmetry, only one half (the upper half) of the geometry needs to be generated. The boundaries of the computational domain will be formed by a circular arc and three straight line segments as sketched below (not to scale). Follow the tutorial to obtain the results as done in the tutorial.

