EES Ver. 10.835: #1867: For use by students and faculty, College of Engineering, University of Oklahoma, Stillwater, OK

## {Question 3E}

Vdot1=3.2[kg/m^3] v1=1.4[m/sec] Vdot2=1.4[kg/m^3] v2=160[m/sec] A1=200\*convert(cm^2, m^2)

mdot=Vdot1\*v1\*A1 {Mass Flow Rate Through The Nozzle: mdot = 0.0896 kg/sec} A2=mdot/Vdot2/v2\*convert(m^2,cm^2) {Exit Area of The Nozzle: A2 = 4 cm^2}

## SOLUTION

## Unit Settings: SI C kPa kJ mass deg

A1 = 0.02 [m<sup>2</sup>] v1 = 1.4 [m/sec] Vdot2 = 1.4 [kg/m<sup>3</sup>] A2 = 4 v2 = 160 [m/sec] mdot = 0.0896Vdot1 =  $3.2 \text{ [kg/m}^3\text{]}$ 

No unit problems were detected.