{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 $[m^2]$	A2 = 4	mdot = 0.0896
v1 = 1.4 [m/sec]	v2 = 160 [m/sec]	Vdot1 = 3.2 $[kg/m^3]$
Vdot2 = 1.4 $[kg/m^3]$		

No unit problems were detected.