Air at a total pressure of 1 atm has a dry bulb temperature of 35°C and ϕ = 15% is passed through an evaporative cooler.

(a) Sketch the process on a psychrometric chart.
(b) Determine the minimum dry bulb temperature that could be attained in the process.
(c) If the air leaves the cooler at a dry bulb temperature of 20°C, find the relative humidity of the air.
(d) If the cross sectional area of the cooler is constant, what happens to the velocity of the air as it passes through? Why? How might you calculate the new velocity?