Using your Skew-T, solve the following problems:

1. $T = 20^\circ\text{C}, T_d = 8^\circ\text{C}$ at 1000 mb.
   
   $w = 6.8\ \text{g/kg} \quad w_s = 15.0\ \text{g/kg} \quad \text{RH} = 45.3\% \quad \text{LCL} = 835\ \text{mb} \quad T_w = 13^\circ\text{C}$

2. $T = -1^\circ\text{C}, T_d = -7^\circ\text{C}$ at 940 mb.
   
   $w = 2.4\ \text{g/kg} \quad w_s = 3.8\ \text{g/kg} \quad \text{RH} = 63.2\% \quad \text{LCL} = 855\ \text{mb} \quad T_w = -3^\circ\text{C}$

3. $T = 13^\circ\text{C}, T_d = -4^\circ\text{C}$ at 800 mb.
   
   $\text{LCL} = 615\ \text{mb} \quad T_w = 4.5^\circ\text{C} \quad \theta = 32^\circ\text{C}$

4. $T = 32^\circ\text{C}, T_d = 25^\circ\text{C}$ at 950 mb.
   
   $\text{LCL} = 860\ \text{mb} \quad T_w = 27.5^\circ\text{C} \quad \theta = 36.5^\circ\text{C}$

5. $T = -10^\circ\text{C}, T_d = -36^\circ\text{C}$ at 720 mb.
   
   $\text{LCL} = 470\ \text{mb} \quad T_w = -14^\circ\text{C} \quad \theta = 16^\circ\text{C}$

6. $T = 14^\circ\text{C}, T_d = -25^\circ\text{C}$ at 770 mb.
   
   $\text{LCL} = 425\ \text{mb} \quad T_w = 1.5^\circ\text{C} \quad \theta = 36^\circ\text{C}$

7. $\text{LCL} = 850\ \text{mb}$ for a parcel with $T = 19^\circ\text{C}$ at 950 mb.
   
   $T_d = 11.5^\circ\text{C} \quad T_w = 14.5^\circ\text{C} \quad w = 9.0\ \text{g/kg}$

8. $\text{LCL} = 700\ \text{mb}$ for a parcel with $T_d = 0^\circ\text{C}$ at 900 mb.
   
   $T = 17.0^\circ\text{C} \quad T_w = 8.5^\circ\text{C} \quad w_s = 13.8\ \text{g/kg}$

9. $\theta = 6^\circ\text{C}$ for a parcel of air at 800 mb.
   
   $T = -11.5^\circ\text{C} \quad w_s = 2.0\ \text{g/kg}$