ATM 211
Skew-T intro, and moisture variables:

Name: _____

Using your Skew-T, solve the following problems:

1. T = 20° C, T_d = 10° C at 1000 mb.

w = _____ w_s = _____ RH = _____

2. T = 14° C, T_d = -2° C at 850 mb.

w = _____ w_s = _____ RH = _____

3. T = 23° C, T_d = 22° C at 980 mb.

w = _____ w_s = _____ RH = _____

4. T = 0° C, T_d = -31° C at 560 mb.

w = _____ w_s = _____ RH = _____

5. T = 38° C, T_d = -3° C at 1010 mb.

w = _____ w_s = _____ RH = _____

6. w = 6 g/kg, w_s = 10 g/kg at 850 mb.

T = _____ T_d = _____ RH = _____

7. w = 1.4 g/kg, w_s = 5.0 g/kg at 1000 mb.

T = _____ T_d = _____ RH = _____

8. w = 9 g/kg, w_s = 28 g/kg at 950 mb.

T = _____ T_d = _____ RH = _____

9. RH = 50%, w = 4.0 g/kg at 750 mb.

T = _____ w_s = _____ Td = _____

10. RH = 100%, T = -15° C at 600 mb.

T_d = _____ w = _____ w_s = _____

11. Why does the relative humidity vary during a typical diurnal (daily) cycle?

12. Is it possible for the relative humidity to be higher on a cold day, than on a warm day? Why/why not?