1. What are the three supercell classifications? Describe why each is classified as such with a single sentence.

2. You see a lightning strike out in a field from your vantage point.

   a. You see the strike "flash" more than two times. What are these "flashes" called?

   b. You audibly hear thunder about 15 seconds after you visually observed the lightning strike. How far away was the strike?

3. Tornado formation has three distinct phases.
   a. Describe each of the phases.

b. What kind of tornado structure would you expect with each phase? Consider drawing examples of these formations.

4. Consider the environment and parcel temperatures below as height increases.

| Height | Environment T | Parcel T/Td |
|--------|---------------|-------------|
| 6km | -22 | -16/-16 |
| 5km | -16 | -10/-10 |
| 4km | -8 | -4/-4 |
| 3km | 2 | 2/2 |
| 2km | 11 | 8/8 |
| 1km | 20 | 14/14 |
| Ground | 26 | 24/14 |

a. What is the LCL?

b. What is the LFC?

c. The 500-mb pressure level is about 6km in altitude. Using the above profile, what is the lifted index value? What does this say about the severity of storms that could form?