

Name: _____

Student ID #: _____

Due: Tuesday May 1st at the end of class Total Points Attainable: 20

Mid-latitude Cyclones and Related Weather

Use the map provided and the weather symbols table provided.

Mapping Questions (7 pts total) where you DRAW on the map provided:

_____ 1) (2 pts) Draw isobars at **4 mb intervals starting at 1000 mb** with a **BLACK** marker (i.e. you must have lines for 1000, 1004, 1008, 1012, 1016, 1020, 1024, 1028 and 1032.

[Note: You will need to draw lines in between stations when there isn't a station with the exact number you're looking for.]

_____ 2) (1 pt) Identify the low pressure center with a **RED CAPITAL LETTER "L."**

_____ 3) (1 pt) Draw the approximate location of the cold front, be sure to have the symbols pointing in the correct direction. *[Note: For full credit use the correct color and symbol]*

_____ 4) (1 pt) Draw the approximate location of the warm front, be sure to have the symbols pointing in the correct direction. *[Note: For full credit use the correct color and symbol]*

_____ 5) (1 pt) Label the warm sector, cold sector and cooler sector of your cyclone.

_____ 6) (1 pt) Shade regions that are covered with cloud (i.e. draw a cartoon gray cloud blob) where you expect cloud cover. Look to your text on page 253 for help!

Midlatitude Cyclone Questions (8 pts total) related specifically to the map provided:

_____ 1) (2 pt) At what stage of development is this mid-latitude cyclone? How do you know?

_____ 2) (2 pts) In which state is occlusion likely to begin? Why?

_____ 3) (2 pts) What type of air mass is likely dominating your warm sector? Your cold sector?

_____ 4) (2 pts) What is the energy source of a cyclone? How is it related to the air masses mentioned above?

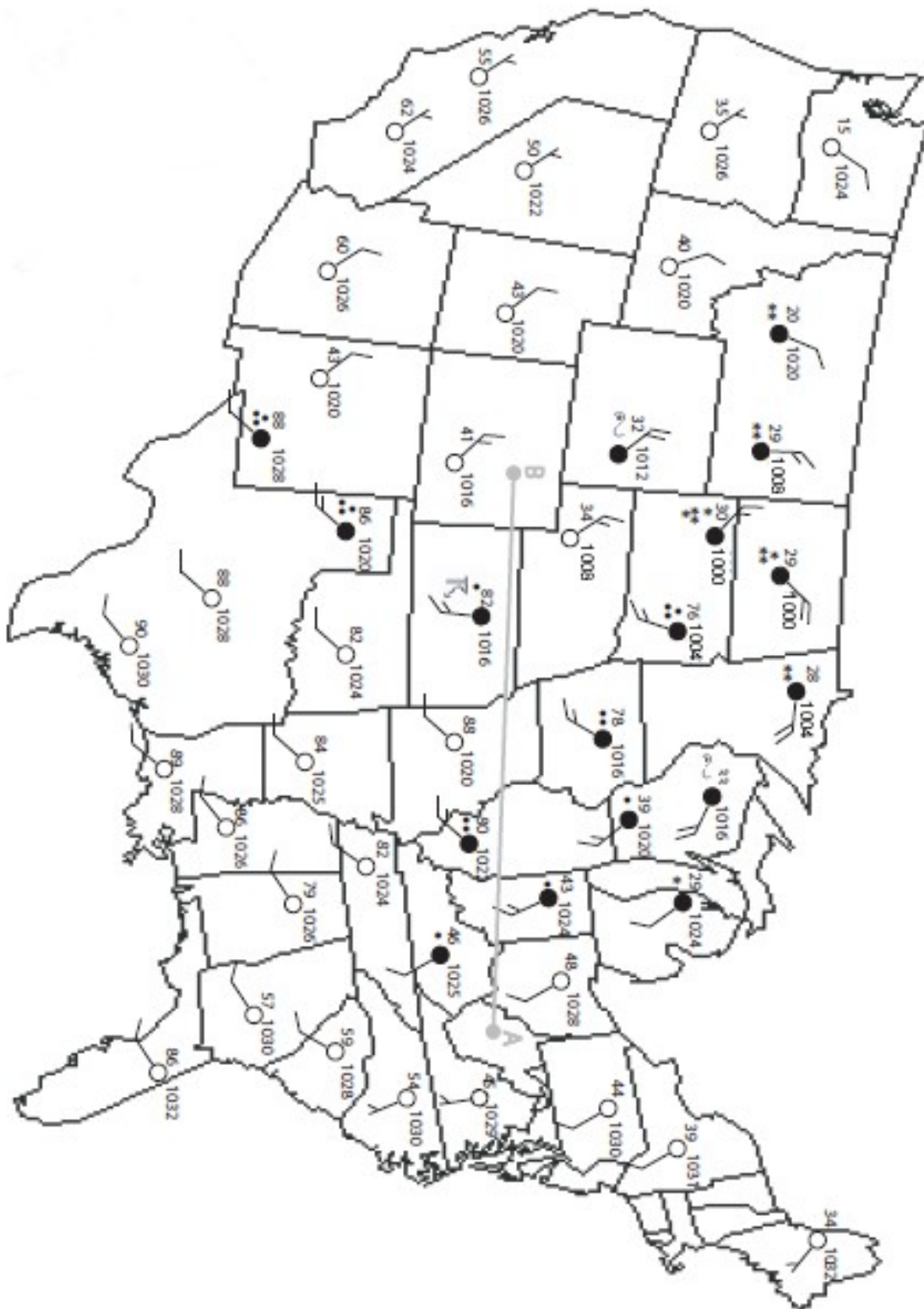
Related Weather Questions (5 pts total) based on the Station Models on the Map:

_____ 1) (1 pt) In which sectors is snow occurring? In which states is moderate or heavy snow occurring?

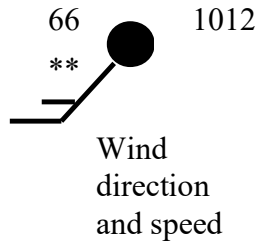
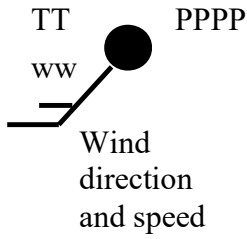
_____ 2) (2 pt) At which frontal boundary is widespread, low intensity precipitation occurring? Why is this the case? In which states is moderate rain occurring?

_____ 3) (1 pt) In which sectors is freezing rain being observed? In which specific states is freezing rain being observed?

_____ 4) (1 pt) Along which frontal boundary are thunderstorms occurring? In which specific state are thunderstorms being observed?



Simplified Explanation of Station Symbols and Map Entries



Where TT = Temperature in degrees F

PPPP = Pressure in mb (I'm using the full pressure, usually it's abbreviated)

ww = Present weather (see Weather Conditions chart below)

Wind direction points in like arrow, the tail is where the wind is coming from imagine the circle as an arrow head pointing in the direction the wind is going.

How filled in the circle is the fraction of sky covered. See Table E in textbook.

● = Completely Overcast (ten tenths covered)

○ = No Clouds

Weather Conditions (for more details see Table H in Appendix B of your text book)

..	•••	••••	Rain (light, moderate, heavy)
* *	* * *	* * * *	Snow (light, moderate, heavy)
⊙	⊙	⊙	Thunder (with rain, snow, no precipitation)
	▽	▽	Shower (rain, snow)
		,,	Drizzle
⊖	⊖		Freezing rain, Freezing drizzle
		△	Ice pellets/Sleet
=	≡		Fog (shallow, deep)
		∞	Haze