

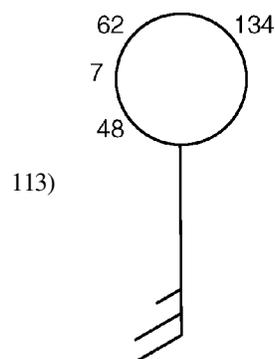
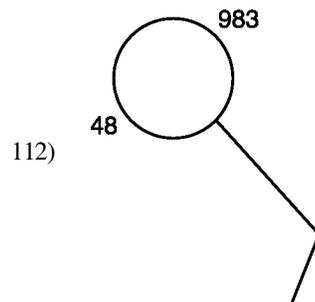
- 1) D 2) A 3) B 4) C 5) C
- 6) D 7) A 8) B 9) D 10) D
- 11) D 12) A 13) B 14) C 15) C
- 16) B 17) D 18) B 19) C 20) C
- 21) D 22) D 23) B 24) A 25) C
- 26) D 27) D 28) A 29) A 30) B
- 31) D 32) B 33) C 34) A 35) C
- 36) C 37) D 38) A 39) B 40) D
- 41) C 42) A 43) B 44) A 45) B
- 46) D 47) B 48) C 49) D 50) B
- 51) D 52) C 53) B 54) B 55) A
- 56) A 57) C 58) D 59) B 60) C
- 61) C 62) B 63) D 64) A 65) B
- 66) D 67) A 68) C 69) B 70) C
- 71) D 72) A 73) D 74) C 75) A
- 76) D 77) B 78) C 79) D 80) A
- 81) D 82) B 83) C 84) B 85) A
- 86) D 87) B 88) C 89) A 90) B
- 91) C 92) A 93) D 94) C 95) A

	Weather Variable	Instrument Used
		<ul style="list-style-type: none"> - barometer - barograph
96)	<ul style="list-style-type: none"> - dewpoint - relative humidity - dry-bulb (air) temperature - wet-bulb temperature - air temperature 	

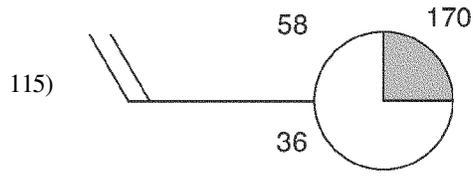
- 97) SAMPLE ANSWERS: condensation OR expansion OR cooling
- 98) 4,520 J
- 99) 2,260 J

100) SAMPLE ANSWERS:
Soil permeability: high OR The soil is unsaturated. OR a soil that allows water to easily or rapidly seep through OR The surface of the soil is not frozen. OR a very permeable soil OR loosely packed large particles;
Land surface slope: a gentle slope OR a slope that is not steep OR a level slope OR flat/a flat plain

- 101) transpiration OR sublimation
- 102) SAMPLE ANSWERS: a decrease in slope OR increased vegetation OR increased infiltration OR a more permeable surface
- 103) SAMPLE ANSWERS: precipitation OR raining OR snowing OR sleeting OR hailing
- 104) SAMPLE ANSWERS: Runoff: increases OR goes up; Infiltration: decreases OR less OR would drop to zero/near zero
- 105) SAMPLE ANSWERS: When precipitation increases, the water table will rise (or get closer to the surface). OR The level of the water table above the bedrock will increase with greater precipitation. OR Less precipitation will cause a lower water table. OR There is a direct relationship between the amount of precipitation and the height of the water table above the impermeable bedrock.
- 106) SAMPLE ANSWERS: an increase in temperature OR The stream's surface area increased. OR increase in wind
- 107) condensation
- 108) SAMPLE ANSWERS: Acid dissolves limestone. OR The calcite in the limestone chemically reacts with acid. OR Limestone is composed of calcite.
- 109) SAMPLE ANSWERS: The heavy rainfall will infiltrate the ground, causing the water table to rise closer to the surface. OR Infiltration will occur. OR The ground becomes more saturated. OR The saturated zone will increase. OR The water table will rise. OR erosion of the land surface
- 110) SAMPLE ANSWER: The sandstone is permeable. OR porous OR allows water to pass through OR The sandstone layer is exposed at the surface.
- 111) SAMPLE ANSWERS: Polluted water will seep into the ground at location A. OR The water well can become polluted. OR Pollution will infiltrate rocks at location A, contaminating groundwater.



114) 1013.4 mb

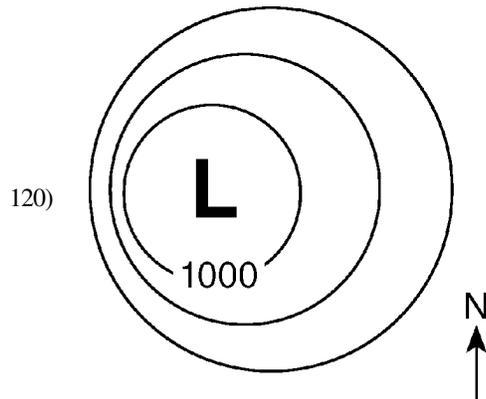


116) SAMPLE ANSWERS: Temperature and dewpoint values are far apart. OR Relative humidity is very low. OR Cloud cover is only 25%. OR Air pressure of 1017.0 mb most likely indicates the presence of a high-pressure system.

117) Air temperature: 31DF; Dewpoint: 29DF; Wind speed: 10 knots; Cloud cover: 100%

118) SAMPLE ANSWERS: The dewpoint and air temperature are nearly the same. OR Snow is falling in Oswego. OR There is 100% cloud cover. OR Air pressure is low.

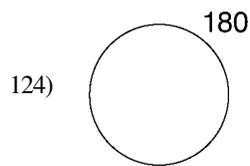
119) 999.5 mb

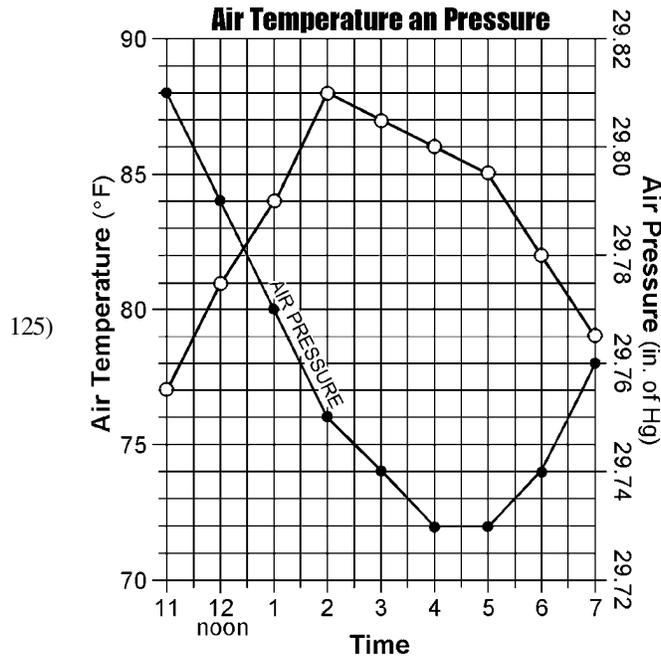


121) SAMPLE ANSWERS: the prevailing southwest winds OR the jet stream OR planetary winds

122) SAMPLE ANSWERS: As air temperature increased, barometric pressure decreased. OR inverse relationship

123) SAMPLE ANSWERS: Date: December 3 OR 12/3/07; Time: 4 p.m. OR 4:00 p.m.





125)

126) SAMPLE ANSWER: As temperature increased, pressure decreased. OR There is an inverse relationship between air temperature and air pressure. OR As one variable increases, the other variable decreases.

127) SAMPLE ANSWERS: Air-mass X: **cP** OR **cA**; Air-mass Y: **mT**

128) SAMPLE ANSWERS: go to the basement OR stay away from windows OR listen to emergency warnings broadcast on radio or TV OR go to a community emergency shelter

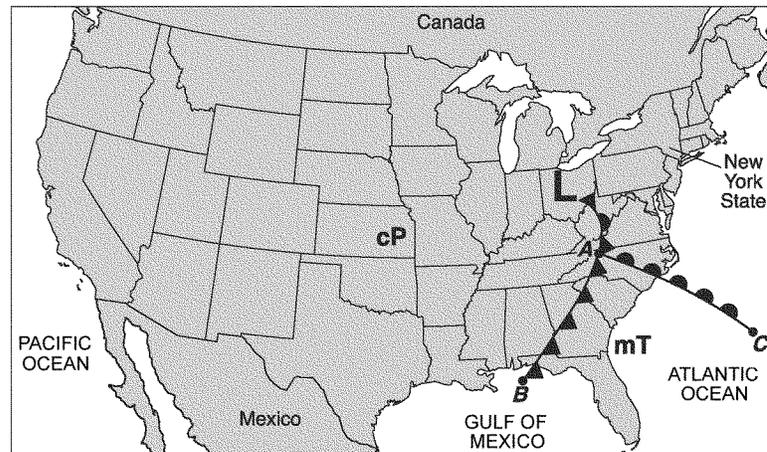
129) -22DC (+2DC)

130) SAMPLE ANSWERS: **cP** OR **cA** OR **mP**

131) SAMPLE ANSWERS: The ocean changes temperature more slowly than the nearby land does. OR Large bodies of water moderate climatic temperatures. OR A warm ocean current is flowing nearby. OR The water has a higher specific heat than the land does.

Map 2 - Weather Fronts

132)

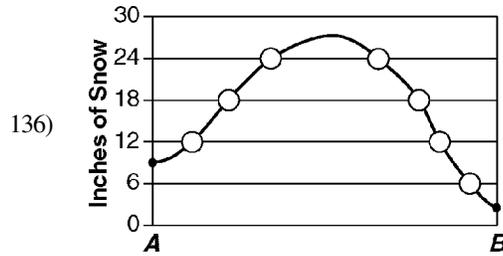


133) SAMPLE ANSWERS: Winds are moving counterclockwise. OR Winds are moving inward toward the low-pressure center. OR in and counterclockwise

134) SAMPLE ANSWERS: Prevailing winds blow toward the northeast. OR New York State is located in the southwesterly wind belt. OR The jet stream moved the low-pressure system in that direction. OR

prevailing winds OR Winds are moving the system northeast.

- 135) SAMPLE ANSWERS: Residents should have purchased extra supplies, such as food and water. OR Residents should have obtained battery-powered radios, flashlights, and/or candles. OR Rock salt or de-icing pellets should have been obtained to clear ice from sidewalks and driveways. OR Check to make sure enough fuel for heat is on hand to last several days. OR People who have emergency generators should check to make sure they are working properly.

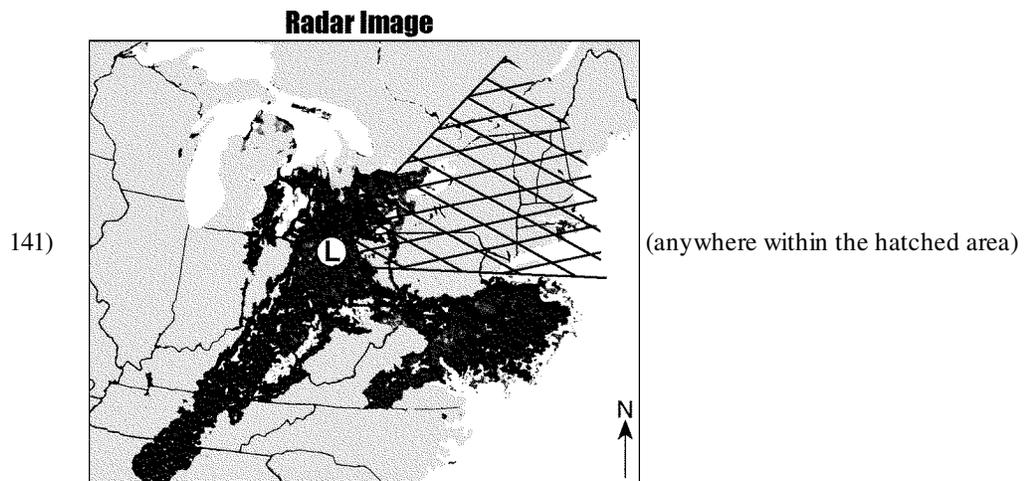


- 137) 93 mi to 107 mi

- 138) greater than 1 in., but less than 6 in.

- 139) SAMPLE ANSWERS: southwest OR SW OR west southwest OR WSW

- 140) SAMPLE ANSWERS: car accidents OR power outages OR damage to homes OR flooding OR trees falling on electrical lines/houses/cars OR heart attack from shoveling OR carbon monoxide poisoning OR no heat in the building



- 142) SAMPLE ANSWERS: prevailing wind direction OR higher elevations OR lake-effect snow OR nearness to large bodies of water

- 143) 0.20DF/mi to 0.30DF/mi

- 144) SAMPLE ANSWERS: Miami is located at a lower latitude. OR Atlantic City receives a lower angle of insolation/less intense insolation. OR The temperatures in Miami are warmed by the Florida Current. OR Miami has a longer duration of insolation.

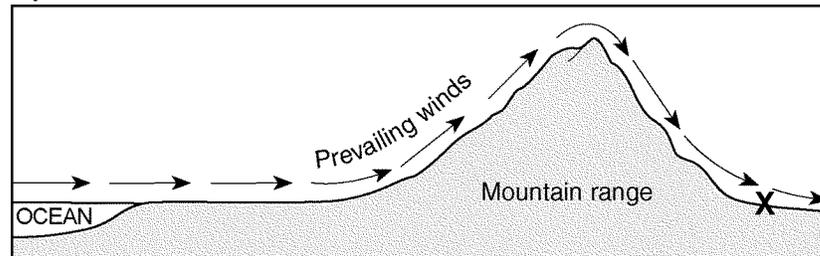
- 145) SAMPLE ANSWERS: expansion OR cooling to the dewpoint OR condensation OR cooling OR deposition

- 146) 2,001 cm to 2,199 cm

- 147) SAMPLE ANSWERS: Warm air from over the South Equatorial Current is less dense. OR The air mass is warmer. OR More moisture is present in the warmer air over the South Equatorial Current. OR The Benguela Current causes the air to be cooler.

- 148) SAMPLE ANSWERS: Air expands as it moves up a mountain. OR The molecules move farther apart as the air rises. OR Lower pressure at higher altitudes allows molecules to move farther apart. OR The less dense air at higher altitudes allows the air molecules to spread out.
- 149) SAMPLE ANSWERS: psychrometer OR wet- and dry-bulb thermometer OR hygrometer
- 150) 100%
- 151) SAMPLE ANSWERS: Air temperature at B: warmer OR higher OR increased; Relative humidity at B: lower OR drier OR decreased
- 152) SAMPLE ANSWERS: Its warmest months are in January and February. OR Its coldest months are in June and July. OR The warm and cold times of the year are the opposite of New York's.

153) dry



- 154) SAMPLE ANSWERS: *B* is higher in elevation. OR Higher elevations have cooler temperatures. OR *B* is in the mountains.
- 155) SAMPLE ANSWERS: Location *X* is located on the leeward side of a mountain. OR Location *X* is located on the rain shadow side of a mountain. OR Location *Y* is located on the windward side of a mountain. OR Moist air rises over location *Y*, resulting in precipitation. OR orographic effect OR A mountain/volcano barrier separates *X* and *Y*. OR Planetary winds bring moisture to location *Y*, but lack this moisture by the time they get to location *X*. OR Location *X* is farther from the ocean.
- 156) SAMPLE ANSWERS: The air travels over Lake Ontario toward Oswego, picking up moisture that results in more snow. OR The air over Toronto contains less moisture. OR Lake-effect storms occur on the eastern side of the lake when the wind is blowing in the direction shown.
- 157) SAMPLE ANSWERS: Old Forge is located in the mountains. OR Higher elevations have colder temperatures. OR Watertown is closer to a large body of water that moderates its temperature.
- 158) SAMPLE ANSWERS: Water has a higher specific heat than land. OR Water takes a longer time to cool than land. OR Land surfaces cool faster.
- 159) **cA OR cP**
- 160) SAMPLE ANSWERS: Reykjavik has a maritime climate. OR The ocean around Iceland moderates Reykjavik's climate. OR Reykjavik is located near a large body of water, which heats and cools more slowly than inland locations. OR Yakutsk is located farther inland.
- 161) SAMPLE ANSWERS: Yakutsk receives less precipitation during the year than Reykjavik OR Yakutsk receives more of its precipitation in summer than in winter. OR Yakutsk receives a higher percentage of precipitation as snowfall.
- 162) SAMPLE ANSWERS: Warm: Norwegian Current or North Atlantic Current; Cool: East Greenland Current