

Chapter 1 Progress Questions

Monitoring the Weather

1. The first weather-related decision I made today could have been
 - a. what to have for breakfast.
 - b. what to wear outside.
 - c. what weekend movie to watch.
2. Which is the state of the atmosphere at a particular place and time?
 - a. Weather
 - b. Climate
3. As seen in a US weather map, the H (or High) and L (or Low) symbols indicate regions where surface air pressures are high or low, respectively, compared to surrounding areas. An H is plotted where the air pressure is highest and an L is plotted where the air pressure is lowest. Proceeding outward and away from the center of a high pressure system, the air pressure
 - a. falls.
 - b. rises.
 - c. does not change.
4. As a low pressure system approaches your locality, the air pressure at your locality probably will
 - a. fall.
 - b. rise.
 - c. stay the same.
5. Assuming that a cold front in Figure 1.6 continues to move toward the east, residents of coastal Virginia and the Carolinas can expect _____ air temperatures in the next day or so. They might also experience thunderstorms.
 - a. higher
 - b. lower
6. Over western Texas at map time in Figure 1.6 the wind is probably blowing from the _____. A wind, by convention, is named for the direction from which it blows.
 - a. south
 - b. north
7. In Figure 1.6, a cold front and a warm front are linked to the L (low-pressure system) over lower Michigan. The symbols identifying the fronts imply that those fronts are rotating in a _____ direction about the L.
 - a. clockwise
 - b. counterclockwise

8. Figure 1.6 indicates that stormy weather is more likely to be taking place at locations near the centers of

- a. Highs.
- b. Lows.

9. In Figure 1.6, the surface air pressure in Wisconsin is probably _____ because the L. in Michigan is likely moving generally eastward.

- a. rising
- b. falling

10. The coldest air in Figure 1.6 is located over northwest Wisconsin to the _____ of the L.

- a. northwest
- b. southeast

11. Fronts are boundaries between air masses that usually contrast in temperature. Above the Earth's surface, fronts slope upward and over the _____ air.

- a. colder
- b. warmer

12. The average air pressure at sea-level in standard meteorological units is _____ millibars.

- a. 1000.00
- b. 1013.25
- c. 1025.47

13. Twenty-four hour surveillance of weather systems by geosynchronous satellite is provided by _____ images.

- a. visible
- b. infrared

14. Water vapor satellite images identify moisture plumes and, when animated, _____ reveal circulation patterns in weather systems before widespread cloud formation.

- a. can
- b. cannot

15. Weather radar emits pulses of _____ energy to detect precipitation.

- a. ultraviolet
- b. visible light
- c. infrared
- d. microwave