

1. The primary factor determining the temperature at which water boils is _____.

- (A) the rate at which heat is added to the water
- (B) atmospheric pressure
- (C) atmospheric temperature
- (D) water vapor pressure

2. Bubbles in boiling water contain _____.

- (A) only air molecules
- (B) only water molecules
- (C) a mixture of air and water molecules
- (D) no air or water molecules

3. Which statement is untrue? Air pressure is _____.

- (A) measured in joules per cubic centimeter
- (B) force per area
- (C) the weight of air per area
- (D) changes from day to day

4. Which statement is untrue? Air pressure _____.

- (A) pushes liquids up a drinking straw when you suck on the straw
- (B) excludes the pressure exerted by water molecules in the air

(C) is the weight of all the air above a given area

(D) on an average day at sea level is 760mm mercury.

5. In a barometer, which measures air pressure, the area above the column of mercury contains _____.

- (A) air molecules
- (B) mercury molecules
- (C) water molecules
- (D) practically no molecules

6. The height of a mercury column in a barometer measures air pressure. Average air pressure is _____.

- (A) 100mm Hg
- (B) 500mm Hg
- (C) 760mm Hg
- (D) 1000mm Hg

7. A pressure cooker _____.

- (A) increases atmospheric pressure and allows food to cook slower
- (B) releases excess atmospheric pressure and allows food to cook faster
- (C) increases atmospheric pressure and allows food to cook faster
- (D) releases excess atmospheric pressure and allows food to cook slower

8. The weight of air pressing down on a square inch of ground at sea level is about the weight of a _____.

- (A) beach ball
- (B) golf ball
- (C) basketball
- (D) bowling ball

9. Which statement is true?

- (A) At higher elevations, water boils at a lower temperature because it is colder at higher elevations.
- (B) At higher elevations, water boils at a lower temperature because the air pressure is lower.
- (C) An aneroid barometer uses low pressure mercury to push on a membrane and move the arrow indicator.
- (D) An aneroid barometer measures elevation above the ground.

10. Which statement is untrue? Air is colder at higher elevations because _____.

- (A) air molecules used their kinetic energy to spread apart at higher elevations
- (B) there are fewer air molecules to transfer heat
- (C) air is further away from the direct source of its heat
- (D) there is less infrared radiation at higher elevations

11. A phase diagram displays when the three phases of water occur as _____.

- (A) the pressure and volume are changed
- (B) the pressure and temperature are changed
- (C) the volume and temperature are changed
- (D) the triple point is varied

12. Increasing the air pressure over water _____.

- (A) lowers the freezing point of water and raises the boiling point
- (B) raises the freezing point of water and lowers the boiling point
- (C) lowers the freezing point and the boiling point of water
- (D) raises the freezing point and the boiling point of water