

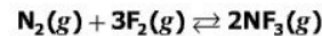
1. A student is studying the effects of several solutions on the prevention of the browning of apples. The student used solutions having different pH values and immersed three apple slices in equal volumes of each of the solutions. Which of these is the independent variable in this investigation?

- A pH of solution
- B Shade of brown
- C Number of apple slices
- D Volume of solutions

2. Which of these values is most responsible for changing the boiling and freezing points of a solvent?

- A Molar mass of the solvent
- B Electronegativity of the solvent
- C Weight of the solute particles
- D Number of the solute particles

3. Calculate the number of moles of Li_3PO_4 in 2.2 L of a 0.60 M Li_3PO_4 solution.



4. Equilibrium has been reached for the reaction shown. Which conclusion is correct?

- A The N_2 and F_2 together will form at a faster rate than the NF_3 .
- B The partial pressure of N_2 , F_2 , and NF_3 will stay constant.
- C The NF_3 will form at a faster rate than the N_2 and F_2 together.
- D The partial pressure of NF_3 will keep changing.

5. If 89.6 joules of heat are needed to heat 20.0 grams of iron from 30.0°C to 40.0°C , what is the specific heat of the iron in $\frac{\text{J}}{\text{g}\cdot^\circ\text{C}}$?

- A 0.448
- B 2.23
- C 8.96
- D 896

6. Increasing the volume of a sealed container will cause the gas particles within the container to –

- A form a liquid
- B collide more frequently
- C increase in molecular attraction
- D exhibit lower pressure