CONCEPT: OSMOTIC PRESSURE

- Recall, it is the force that drives the movement of water from a _____ concentration to a _____ concentration.
  - □ The osmotic pressure of a solution can be influenced by its _____ and _____.

Osmotic Pressure Formula

_____ = ___ • ___ • ___ • ___

- □ ___ = Osmotic Pressure in _____.
- □ ____ = Van't Hoff Factor
- □ ____ = Solubility or Concentration in _____.
- □ ____ = Gas constant: _____.
- □ ____ = Temperature in _____.

EXAMPLE: Calculate the osmotic pressure of a solution containing 18.30 mg of ZnO in 15.1 mL of solution at 26ºC.

PRACTICE: The osmotic pressure of blood is 5950.8 mmHg at 41ºC. What mass of glucose, $C_6H_{12}O_6$, is needed to prepare 5.51 L of solution. The osmotic pressure of the glucose solution is equal to the osmotic pressure of blood.

PRACTICE: The osmotic pressure of a solution containing 7.0 g of insulin per liter is 23 torr at 25ºC. What is the molar mass of insulin? (1 atm = 760 torr)