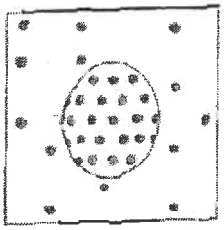
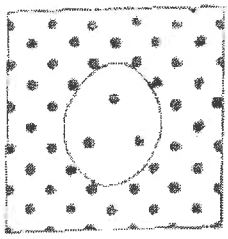
OSMOSIS NAME Key

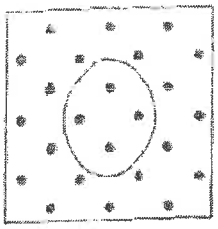
Label the pictures below (isotonic, hypertonic, or hypotonic)



hypo



hyper



iso

hyper tonic means there is a GREATER concentration of solute molecules OUTSIDE the cell than inside.

hypo tonic means there is a LOWER concentration of solute molecules OUTSIDE the cell than inside.

iso tonic means there is the SAME concentration of solute molecules outside the cell as inside.

The pressure inside a plant cell caused by water pushing against the cell wall is called turgor pressure.

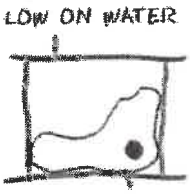
The SWELLING AND BURSTING of animal cells occurs because increased osmotic pressure

Cells swell and burst

This happens when a cell is placed in a hypo tonic solution.

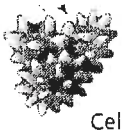
Placing plant cells in a HYPOTONIC solution causes the osmotic pressure to increase.
increase decrease

Plant cells will shrivel when water leaves so the cell membrane pulls away from the cell wall.



It happens when a plant cell is placed into hyper tonic solution.

When water leaves a plant cell, the osmotic pressure will decrease.
increase decrease



Cells shrink and shrivel

ANIMAL cells that are placed in a HYPERTONIC solution will shrink because H_2O leaves the cell + they dehydrate.

Cells stay the same size when placed in an iso tonic solution because the amount of water leaving the cell is the same and the amount of water entering.

Transport Across The Cell Membrane

Use Figure 1.25 on page 43 to help you answer the following 4 questions:

1. A cell that is 70 % water (30% concentrated) is placed into a 30 % sugar water solution, what will happen to the cell? Water will __?___ of the cell equally.

a) in only b) in and out c) out only

2. A cell that is 60% water (40% concentrated) is placed into a 30 % sugar solution in water. What will happen to the cell? Water will __?___move the cell.

a) into b) in and out c) out of

3. If a cell that is 80% water (20% concentrated) is placed into a 30% sugar in water solution, what will happen to the cell? Water will move ___?__ the cell.

a) into b) in and out c) out of

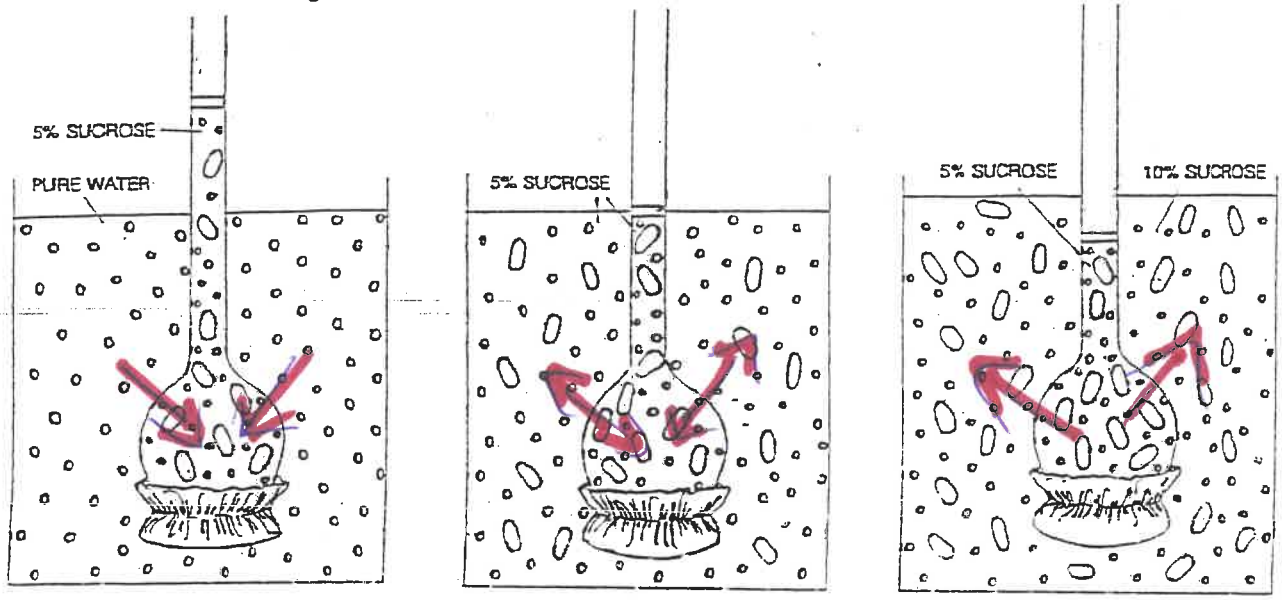
4. If a cell that is 80% water (20% concentrated) is placed into a distilled water solution, what will happen to the cell? Water will move ___?___ the cell.

a) into b) in and out c) out of

Osmosis Diagram

A) Label each of the following diagram as being: **isotonic; hypertonic; hypotonic**

B) Using a **red** pen, draw arrows to indicate the direction of water flow for each diagram.



Hypotonic Isotonic Hypertonic