

Name: _____ Date: _____

Osmosis Practice

_____ is when the concentration of water inside is equal to the concentration of water outside.

_____ is when the concentration of water inside the cell is less than outside.

_____ is when there is a greater concentration of water inside the cell than outside.

Problem 1: Cell- 90% water concentration Solution- 90% water concentration

- What is happening to the cell? (Increasing/Decreasing/Staying in Homeostasis)
- What solution is this?

Problem 2: Cell- 90% water concentration Solution- 10% water concentration

- What is happening to the cell? (Increasing/Decreasing/Staying in Homeostasis)
- What solution is this?

Problem 3: Cell- 30% salt concentration Solution- 70% salt concentration

- What is happening to the cell? (Increasing/Decreasing/Staying in Homeostasis)
- What solution is this?

Problem 4: Cell- 70% water concentration Solution- 30% salt concentration

- What is happening to the cell? (Increasing/Decreasing/Staying in Homeostasis)
- What solution is this?

Problem 5: Cell- 70% salt concentration Solution- 90% water

- What is happening to the cell? (Increasing/Decreasing/Staying in Homeostasis)
- What kind of solution is this?

Problem 6: A freshwater fish has cells that are about 70% water. The fish is placed in a salt water environment where the concentration of water is 60%.

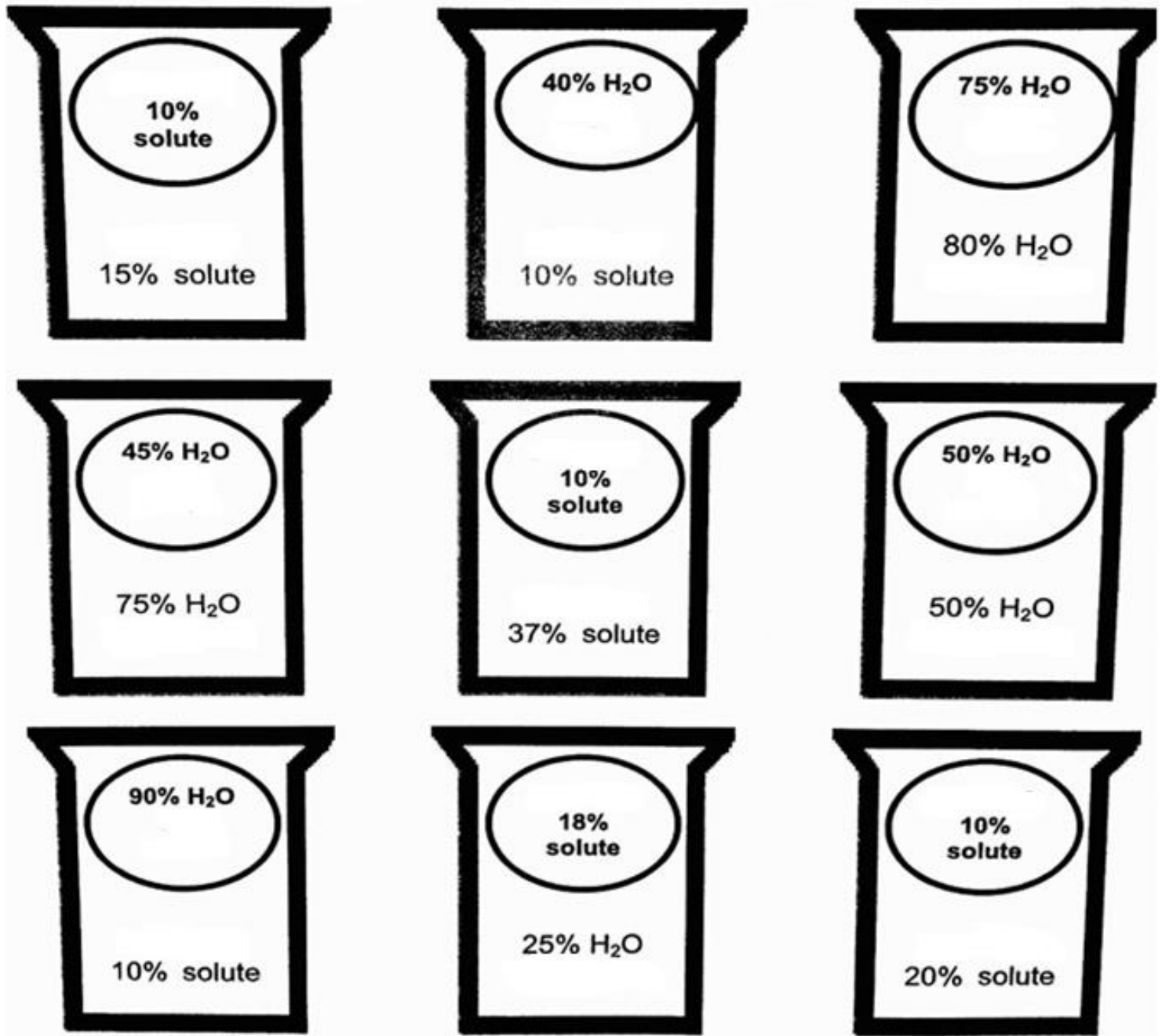
- What type of solution is this for the fish?
- What will happen to the cells of the fish?
- How will the fish be affected?

Problem 7: A cell with a 30% solute concentration is placed in a beaker with a 10% solute concentration. What will happen to the cell over time?

- What will happen to the cell?
- What type of a solution is this?

Below are animal cells placed in beakers of various concentrations.

1. Draw an arrow to show which way the water would move by Osmosis.
2. Write the missing percentages of water and/or solute.
3. Write what each type of solution is. (Isotonic, Hypertonic, or Hypotonic)



1. If an animal cell is placed in distilled water, it will swell and burst. Explain what type of passive transport occurred and what caused the cell to burst.

2. Movement across the cell membrane that does not require energy is called (active / passive) transport.
3. Passive transport moves substances down their concentration gradient (with / without) using the cell's energy.