

Name: _____ Date: _____ Period: _____

Cell Transport Word Problems

Directions: For each description of cell transport given below, circle the bold term that correctly completes the statement.

1. Suppose you are trying to transport glucose across the cell membrane in red blood cells. Glucose is a large, polar molecule, so it must cross the membrane using **Diffusion / Facilitated Diffusion**.
2. Farming that is done in very dry regions of the world leaves salts (solutes) that build up in the soil. Excess salt in the soil (the environment surrounding plant cells) is bad because it causes water to move **Into / Out Of** the plant cells from a **High / Low** water concentration inside the plant cell to a **High / Low** water concentration in soil.
3. Last night, a skunk accidentally got locked in your friend's house. While it was in the kitchen, it heard the icemaker in the refrigerator and got scared. Instinctually, it sprayed its smelly mist over the kitchen. Within ten minutes, your friend (who was asleep in the bedroom) awoke to a terrible smell. The smell got into the bedroom by diffusing **Up / Down** its concentration gradient. This is an example of **Passive / Active** transport.
4. A cell needs to take in Na^+ from its outside environment, but Na^+ has a higher concentration inside the cell than in the outside environment. The only way to move Na^+ into the cell is by **Passive / Active** transport using **Channel Proteins / Protein Pumps**.
5. A cell needs to send out large amounts of waste. The cell uses **Endocytosis / Exocytosis** to send this waste out of the cell using **Channel Proteins / Vesicles**.
6. You have a cell, with a semi permeable membrane and a 1.5% potassium concentration. You put it into a solution of 2% potassium. The outside solution is **Hypotonic / Hypertonic / Isotonic** to the cell. Water will move **Into / Out of** the cell and cause the cell to **Decrease / Increase / Stay Constant** in size.
7. You have a cell, with a semi permeable membrane and a 1.5% potassium concentration. You put it into a solution of 1.5% potassium. The outside solution is **Hypotonic / Hypertonic / Isotonic** to the cell. Water will move **Into / Out of** the cell and cause the cell to **Decrease / Increase / Stay Constant** in size.
8. You have a cell, with a semi permeable membrane and a 1.2% chloride concentration. You put it into a solution of 1.05% chloride. The outside solution is **Hypotonic / Hypertonic / Isotonic** to the cell. Water will move **Into / Out of** the cell and cause the cell to **Decrease / Increase / Stay Constant** in size.
9. You have a cell, with a semi permeable membrane and a 0.5% calcium concentration. You put it into a solution of 0.05% calcium. The outside solution is **Hypotonic / Hypertonic / Isotonic** to the cell. Water will move **Into / Out of** the cell and cause the cell to **Decrease / Increase / Stay Constant** in size.
10. You have a cell, with a semi permeable membrane and a 0.05% sodium concentration. You put it into a solution of 0.2% sodium. The outside solution is **Hypotonic / Hypertonic / Isotonic** to the cell. Water will move **Into / Out of** the cell and cause the cell to **Decrease / Increase / Stay Constant** in size.