

NAME: _____

BLOCK: _____

TONICITY WORD PROBLEMS

PRACTICE

1. A cell containing 74% water is placed into an environment containing 80% solute. Is the environment hypertonic, hypotonic, or isotonic? Is the cell hypertonic, hypotonic, or isotonic? Will the cell shrink or swell?
2. A cell containing 25% solute is placed into an environment containing 15% solute. In which direction will the water move? Will the cell swell or shrink?
3. A cell is placed in a solution of sugar and water. The cell has a sugar solution made up of 15mg of sugar and the outside has a sugar solution made-up of 20mg of sugar. The cell membrane is permeable to both water and sugar. Is the cell hypertonic, hypotonic, or isotonic? Which way will water move?
4. A cell is placed in a solution of sugar and water. The cell has a 10% sugar concentration and the outside has a 35% sugar concentration. The cell membrane is not permeable to sugar. Is the environment hypertonic, hypotonic, or isotonic? Which way will water move? Will the cell shrink or swell?