

## Osmosis Worksheet #1

*When providing the best possible answer to the following questions please apply all learned scientific techniques and procedures, do not use abbreviations, use proper scientific terminology, show work for all mathematical calculations, use all significant figure and scientific notation rules, apply appropriate writing strategies, and note that at all times spelling counts. Your ability to meet these and all established classroom expectations, including labeling of BINs, providing heading information, and your ability to follow directions may be included in computation of grade.*

Below are animal cells placed in beakers containing solutions of various concentrations.

1. Fill in any missing percentages for the water concentrations and the solute concentrations.
2. Draw an arrow clearly showing directional net movement of the water during osmosis.
3. Identify the type of solution in the beaker as isotonic, hypertonic or hypotonic.

90% H<sub>2</sub>O  
— %  
solute

85% H<sub>2</sub>O  
15% solute

40% H<sub>2</sub>O  
— %  
solute

90% H<sub>2</sub>O  
— % solute

75% H<sub>2</sub>O  
— %  
solute

— % H<sub>2</sub>O  
20% solute

— % H<sub>2</sub>O  
55%  
solute

— % H<sub>2</sub>O  
25% solute

— % H<sub>2</sub>O  
10%  
solute

63% H<sub>2</sub>O  
— % solute

50% H<sub>2</sub>O  
— %  
solute

— % H<sub>2</sub>O  
50% solute

— % H<sub>2</sub>O  
10%  
solute

90% H<sub>2</sub>O  
— % solute

82% H<sub>2</sub>O  
— %  
solute

— % H<sub>2</sub>O  
75% solute

— % H<sub>2</sub>O  
10%  
solute

80% H<sub>2</sub>O  
— % solute

—% H<sub>2</sub>O  
10%  
solute

—% H<sub>2</sub>O  
20% solute

—% H<sub>2</sub>O  
40%  
solute

—% H<sub>2</sub>O  
30% solute

75% H<sub>2</sub>O  
—%  
solute

80% H<sub>2</sub>O  
—% solute

—% H<sub>2</sub>O  
43%  
solute

—% H<sub>2</sub>O  
60% solute

60% H<sub>2</sub>O  
40%  
solute

80% H<sub>2</sub>O  
—% solute

—% H<sub>2</sub>O  
10%  
solute

—% H<sub>2</sub>O  
10% solute

—% H<sub>2</sub>O  
15%  
solute

80% H<sub>2</sub>O  
—% solute

—% H<sub>2</sub>O  
39%  
solute

—% H<sub>2</sub>O  
20% solute

90% H<sub>2</sub>O  
—%  
solute

35% H<sub>2</sub>O  
—% solute