

Unit #4 Review Sheet

1. What does ATP stand for?
What does ATP do for the cell?

2. Draw and label what a molecule of ATP looks like?

3. What is the difference between ATP & ADP?

4. Write the equation for cellular respiration using words.

5. Write the equation for cellular respiration in molecular formula.

6. Write the equation for photosynthesis using words.

7. Write the equation for photosynthesis in molecular formula.

8. List the reactants of cellular respiration.

9. List the products of cellular respiration.

10. In what organelle does cellular respiration occur?

11. Explain the significance of the mitochondria having a curved inner membrane.

12. What is the difference between *aerobic* & *anaerobic* cellular respiration?

13. List the 3 steps of aerobic cellular respiration & include the # of ATP made in each step.

14. What is another name for anaerobic cellular respiration?

15. What are the 2 types of anaerobic cellular respiration & what types of organisms do each?

16. List the reactants of photosynthesis.

17. List the products of photosynthesis.

18. In what organelle does photosynthesis occur?

19. What factors would increase the rate of photosynthesis?

20. True or False:
..... The Cell Membrane and the Plasma Membrane are the same structure.

21. What term means that the cell is picky about what enters and leaves?

22. How many layers thick is the Plasma membrane?

23. What are the 2 components that make up the Cell Membrane?

- 1.
- 2.

24. Define the terms *hydrophilic* and *hydrophobic*.

Hydrophilic:
Hydrophobic:

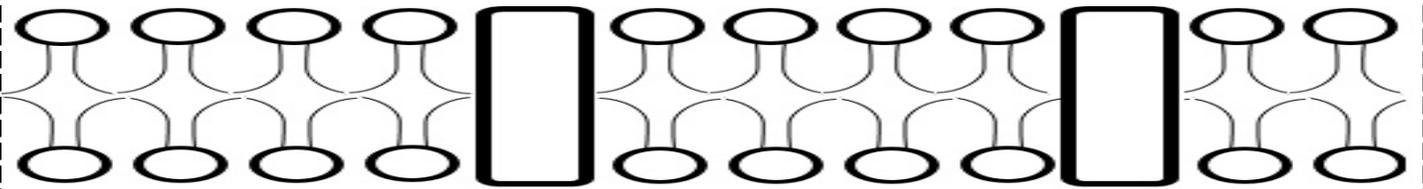
25. Define the terms *polar* and *nonpolar*.

Polar:
Nonpolar:

26. What term means that the cell is in "balance"? Explain how this term relates to the Cell Membrane.

27. Define *dynamic equilibrium*

28. Label the Plasma Membrane below using the following terms: *Protein, Phospholipid, Polar, Nonpolar, Hydrophilic, Hydrophobic, Cytoplasm, Extracellular Fluid*



29. How is *Passive Transport* different than *Active Transport*?

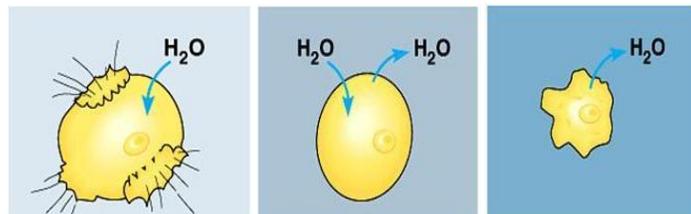
30. Give 3 examples of *Passive Transport*:

- 1.
- 2.
- 3.

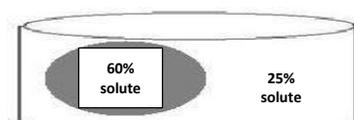
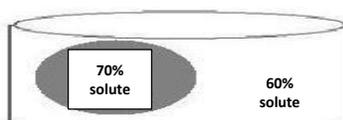
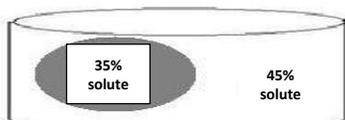
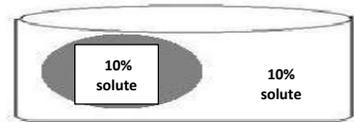
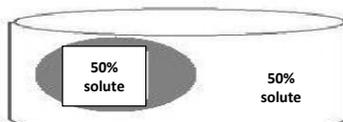
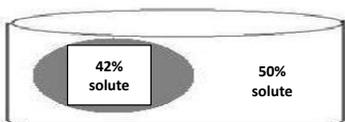
31. Define *osmosis*

32. Define *concentration gradient*

33. Explain how water moves in regards to the cell in each of the following solutions. Label each cell picture as *hypertonic, hypotonic, & isotonic*.



34. How does water move in each of these solutions? Draw arrows & label each as *hypotonic, isotonic, or hypertonic*.



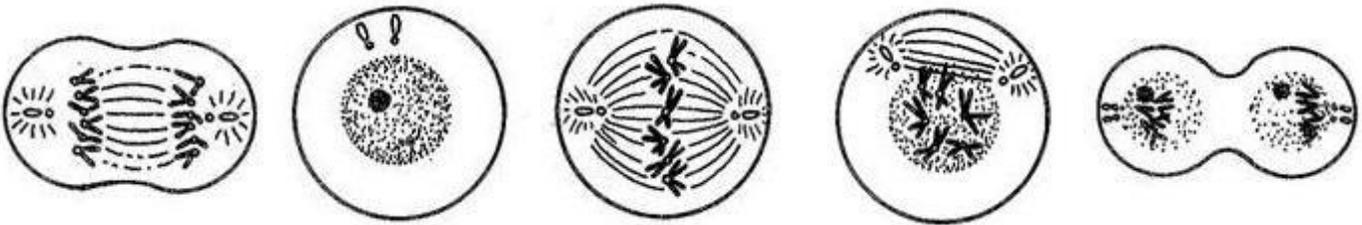
35. What is the Cell Cycle?

36. What are the 2 phases that make up the cell cycle?

37. What are the 3 divisions of interphase and describe what the cell is doing in each of the 3 phases:

38. What are the 4 divisions of Mitosis listed in the order in which they occur?

39. Label the following stages of the cell cycle and put them in the correct order:



40. Define cancer:

41. What is a tumor?

42. Define the following terms:

Benign:

Malignant:

43. Define the term metastasis.

44. What are 2 factors that can impact one's risk of developing cancer?

45. What are two medical treatments for cancer?