Name _____ Date _____ Period _____

Worksheet: Chapter 3 Review
B I O L O G Y

Directions: *Answer the following questions using your notes and textbook (pages 68-91)*

1. Describe how the following scientists contributed to the development of the **Cell Theory** (5 pts.)

a. **Robert Hooke**-

b. **Anton van Leeuwenhoek**-

c. **Matthias Schleiden**-

d. **Theordor Schwann**-

e. **Rudolf Virchow**-

2. List the three (3) major principles of the **Cell Theory** (3 pts.)

a.

b.

c.

3. Complete the chart below describing the similarities and differences between **Eukaryotic** and **Prokaryotic** cells- answer either yes or no. (7 pts.)

Contains	Prokaryotic Cells	Eukaryotic Cells
Has nucleus		
Has membrane-bound organelles		
Has cytoplasm		
Can be multicellular		
Considered a “living” thing		
Has a cell wall		
Contains genetic material		

4. Complete the chart below comparing **plant** and **animal cells** –answer either yes or no (9 pts.)

Contains	Animal cells	Plant cells
Nucleus		
Cell wall		
Cell membrane		
Mitochondria		
Chloroplasts		
Ribosomes		
Large central vacuole		
Centrioles		
Lysosomes		

5. Draw and label a diagram of a typical **cell membrane**. Identify the following structures: **lipid bilayer** (**phospholipids**), **protein channels**, **carbohydrate chain** (6 pts.)

6. Decribe what is happening in Figure 3.23 on page 86 (3 pts.)

a. **Isotonic solution**-

b. **Hypertonic solution**-

c. **Hypotonic solution**-

7. Draw and label a typical **plant cell**. Label the following cell structures: ***cell wall, cell membrane, nucleus, nucleolus, chloroplast, mitochondria, endoplasmic reticulum (both rough and smooth), golgi apparatus, vacuole, ribosome***

8. Draw and label a typical **animal cell**. Label the following cell structures: ***cell membrane, nucleus, nucleolus, mitochondria, endoplasmic reticulum (both rough and smooth), golgi apparatus, vacuole, ribosome, centriole, lysosome, vesicle***