

Names: _____ Cohort: _____ Date: _____

Cell Biology Review

Part A: The 6 Characteristics of Living Things

In the chart below write down the 6 characteristics of living things.

What are the characteristics of living things?
1.
2.
3.
4.
5.
6.

Part B: Is it alive?

In the chart below write down if the object listed below is **living or non-living**. Then, give **one** reason why it is alive or not alive.

OBJECT	LIVING, NON-LIVING	EXPLANATION
1. Rabbit		
2. Apples		
3. Television		

Part C: Cell Evolution

1. What is the accepted theory on how Eukaryotes evolved?

2. What did we read in science in the news that may change this theory of evolution?

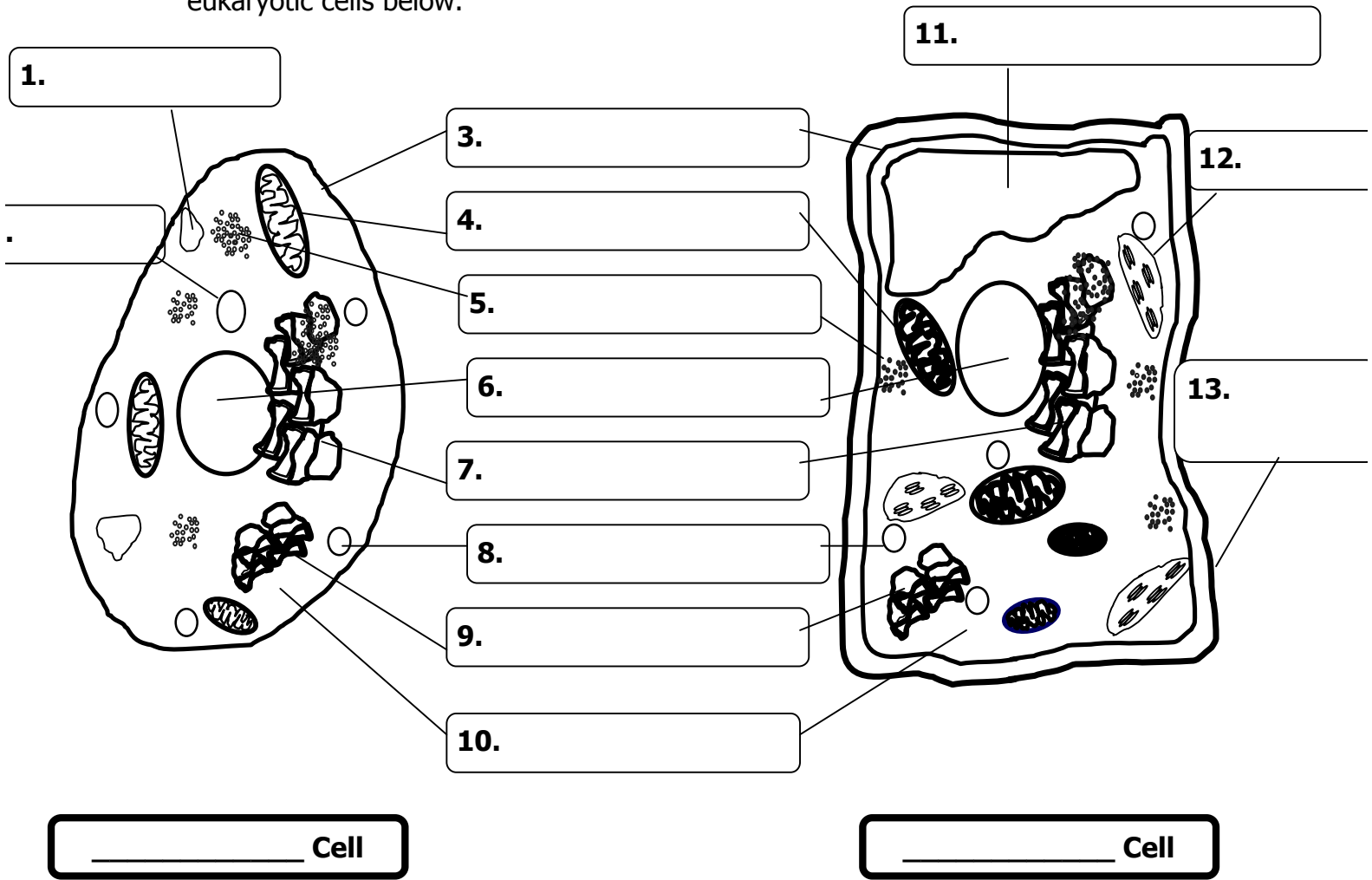
Part D: Compare and Contrast Animal Cells and Plant Cells

1. What are the 3 main differences between an Animal Cell and a Plant Cell?

- a. _____
- b. _____
- c. _____

Part E: Animal Cell VS Plant Cell

In the space below correctly label the different organelles on the eukaryotic cells below.



Part F: Cell Organelles

In the boxes below write down the function of each cell organelle.

Cell Organelle	Organelle Function
1. Nucleus	
2. Cell Membrane	
3. Chloroplast	
4. Vacuole	
5. Mitochondria	
6. Cell Wall	

Part G: Cell Energy Review Questions

1. Which part of the cell is responsible for releasing energy from food in Animal and Plant Cells?

2. Which part of the Plant Cell is responsible for making energy from the Sun's light?

3. What is the balanced chemical equation for Photosynthesis?

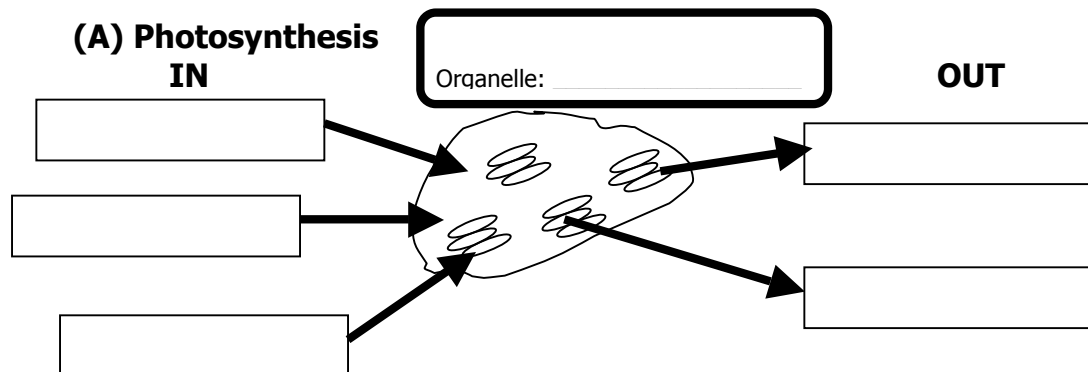
_____ + _____ + _____ → _____ + _____

4. What is the balanced chemical equation for Cellular Respiration?

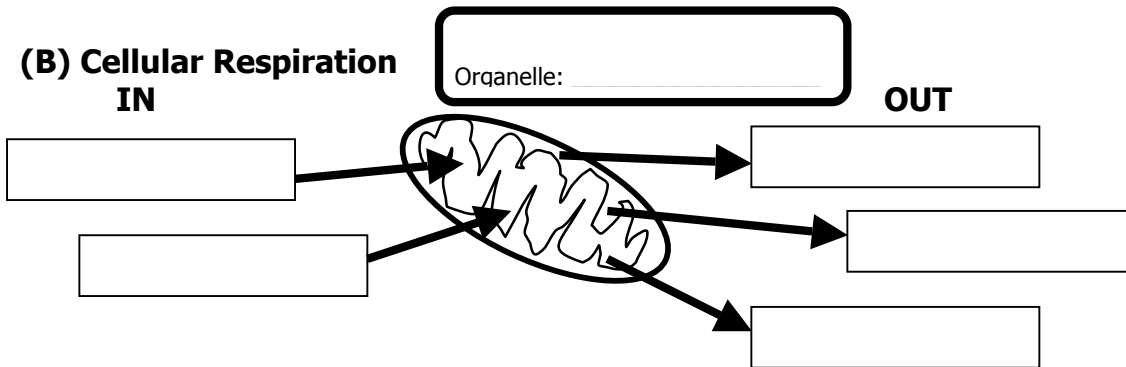
_____ + _____ → _____ + _____ + _____

Part H: Photosynthesis VS. Cellular Respiration – 17 points

Complete the diagrams below to show how photosynthesis and cellular respiration occur.



(B) Cellular Respiration
IN



(C) How are photosynthesis and cellular respiration related to each other?

Part I: Cell Analogies

Complete the boxes below by telling (1) what is the Grant city analogy for each of the 6 cell parts and then (2) explain how these parts do the same job.

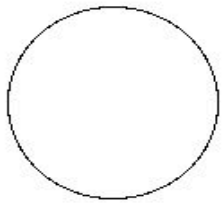
Cell Organelle	Analogy What is this cell part like?	How is the analogy similar to the organelle's function (job)?
1. Cell Wall		
2. Nucleus		
3. Mitochondria		
4. Chloroplast		
5. Vacuole		

6. Cell Membrane		
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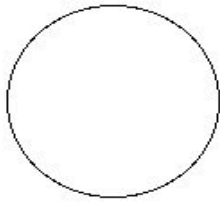
PART J: Reproduction For Eukaryotes

Draw in what is happening to the chromosomes till you create 2 daughter cells

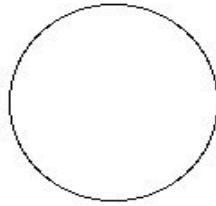
Mitosis



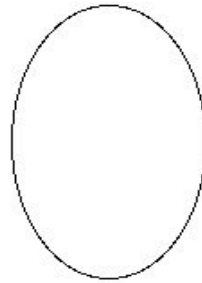
Interphase



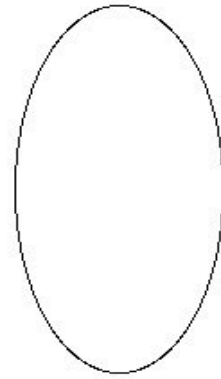
Prophase



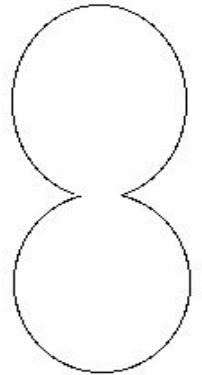
Metaphase



Anaphase



Telophase

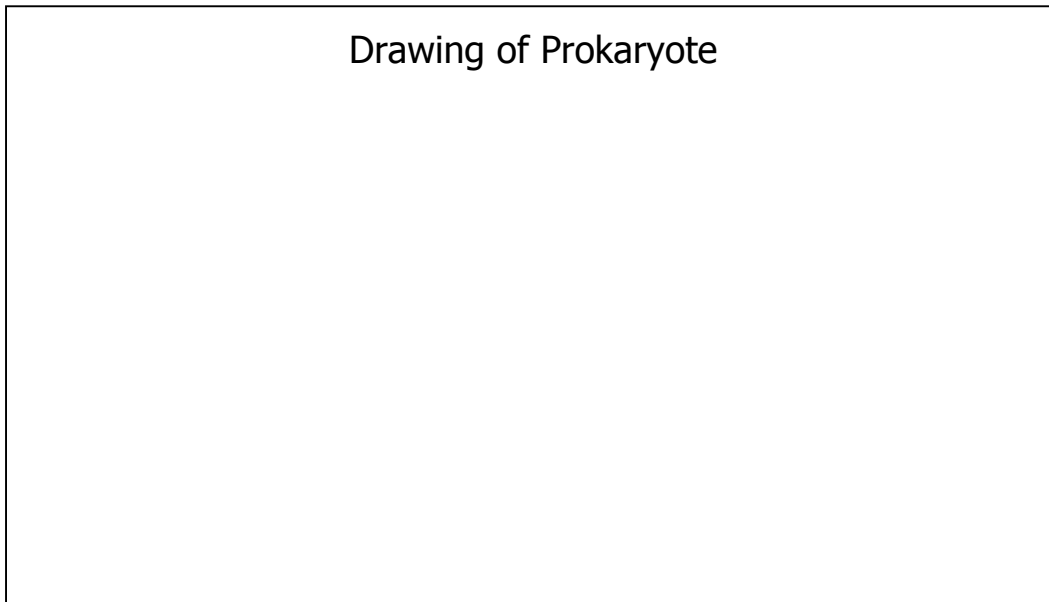


Cytokinesis

Part K: Write out in words what is happening in each of the 4 phases of Mitosis and Cytokinesis

P	
M	
A	
T	
Cytokinesis	

Part L: Draw a prokaryotic cell below and label all of its parts from the word bank



Word Bank

- Capsule
- Cell Wall
- Plasma Membrane
- Pilli
- Flagellum
- Ribosome
- Cytoplasm

Part M: Contrast a prokaryotic cell with a eukaryotic cell.

Eukaryotic Cells	Prokaryotic Cells
1.	1.
2.	2.
3.	3.
4.	4.

Part N: What is Binary Fission? How is it different than mitosis, draw or explain in words

1. What is Binary Fission? _____
2. How is Binary Fission different than Mitosis?

You're Done!
Remember your test on Friday October 3!