

Review Questions - Chapter 4

Name Key

1. What 3 things do all cells have in common?

cytoplasm cell membrane ribosome DNA

2. What are the differences between prokaryotic and eukaryotic cells? What types of organisms make up each group?

no nucleus
Bacteria/Archae

nucleus
plant/animal/protist/

3. As a cell increases in size, what happens to the surface area to volume ratio? What affect does this have on the cell?

↑ size = less S.A per unit volume

4. Which organelles are found in plants but not animals?

cell wall, chloroplast large central vacuole

5. Which organelles are found in animals but not plants?

??? lysosomes in some

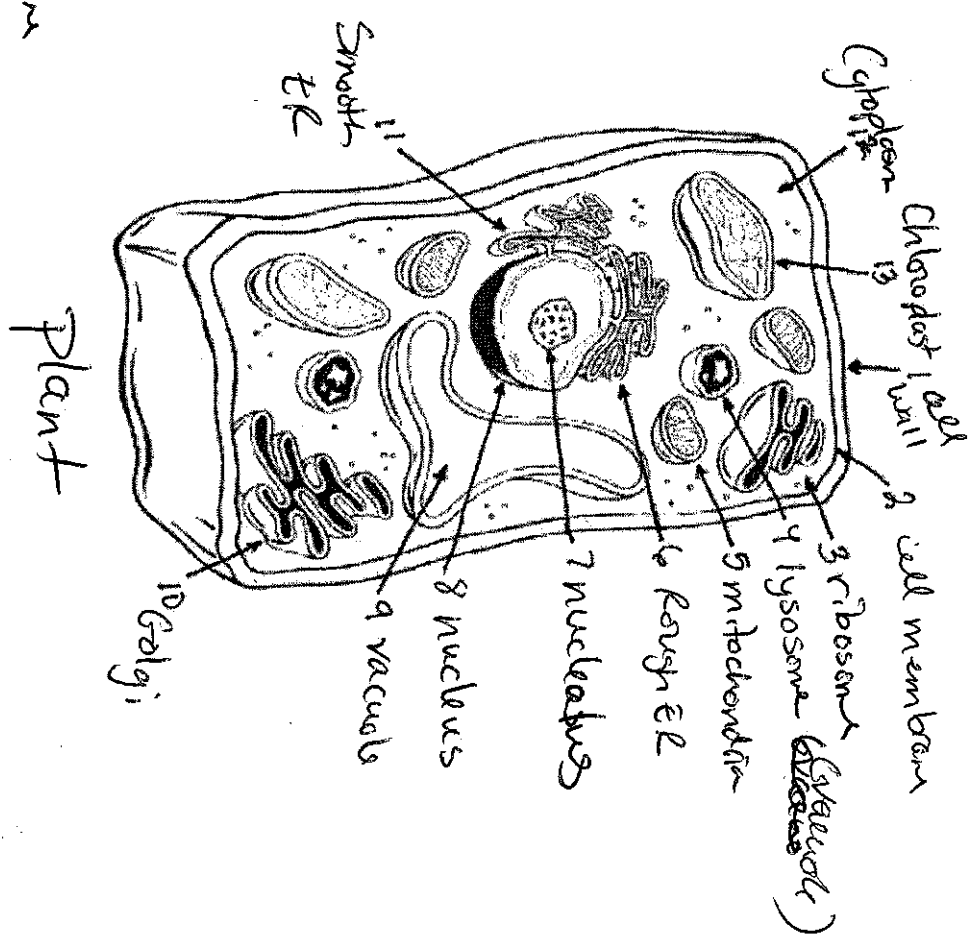
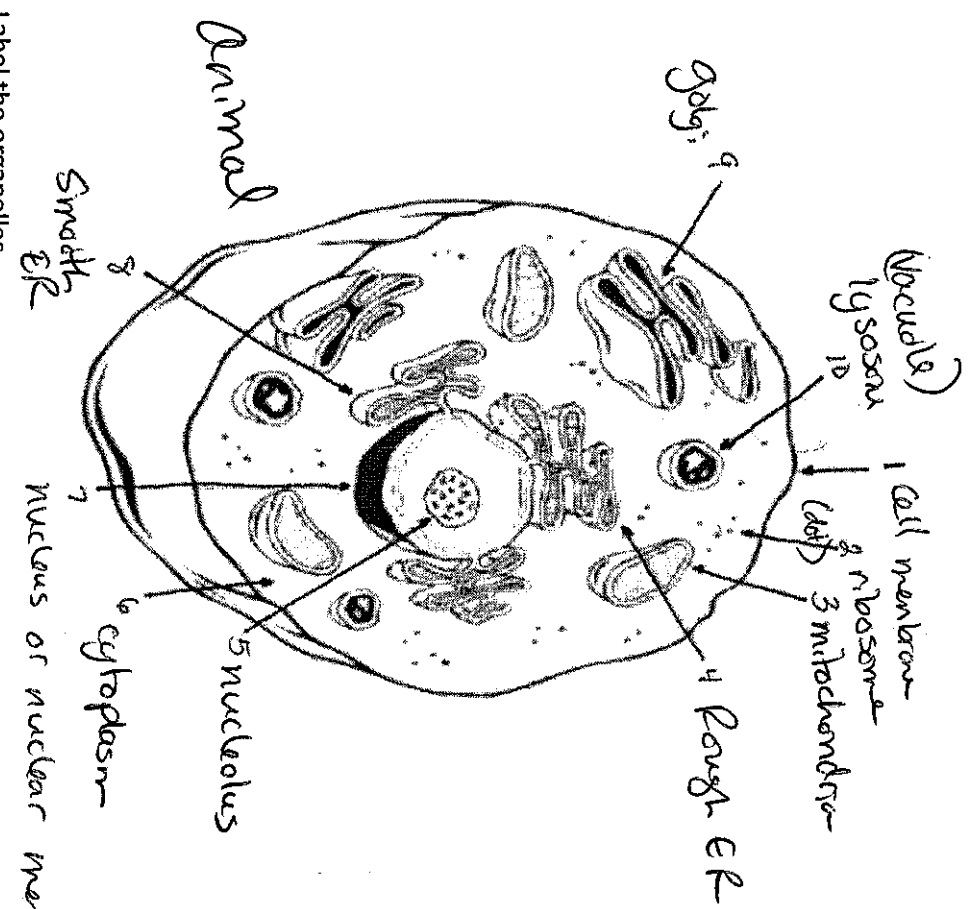
6. Which organelles are described by the following:

- a. converts light energy into food chloroplasts
- b. support of the cell, contains cellulose cell wall
- c. breaks down glucose, forms ATP mitochondria
- d. forms subunits of ribosomes nucleolus
- e. modification of proteins golgi (book says ER)
- f. contains enzymes that carry out intracellular digestion lysosome
- g. organelle compared to a whip flagella
- h. made up of lipid bilayer and proteins cell membrane (nuclear membrane)
- i. part of its membrane pinches off to form vesicles for storage or transport golgi/ER
- j. may be rough or smooth ER
- k. polypeptide chains or proteins are constructed here ribosome
- l. contains DNA nucleus / nucleoid (chromosomes)
- m. fluid filled sacs - may store food or water vacuole
- n. the rough ER has these on its surface ribosomes
- o. organelle within the nucleus of a cell nucleolus

7. What is the difference between a nucleus and a nucleoid?

membrane
Euk

no membrane
prok



Label the organelles.

Are these cells prokaryotes or eukaryotes? eukaryotes How do you know?

Nucleus

Label each cell as a plant or animal cell. Describe three differences between a plant and animal cell.

See above side!