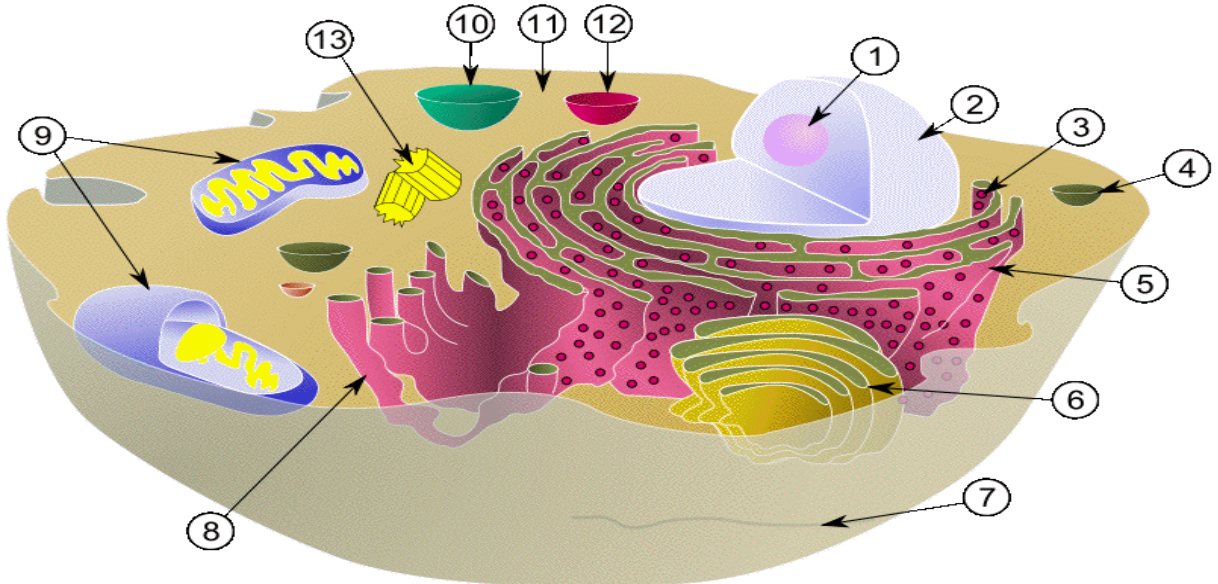


TD N°1**Exercise 1 :**

1. Put the numbers 1 through 13 on the figure.



2. What else could be found in a plant cell?
3. A eukaryotic cell is one that: a) Has a nucleoid; b) Is divided into compartments; c) Has a cytoskeleton and performs endomembrane flow.

Exercise 2 :

List the major characteristics of a prokaryotic and eukaryotic cell, highlighting their key distinctions, in the form of a comparative table.

Characteristics	Prokaryotic cell	Eukaryotic cell
Typical Size		
Nucleus Type		
Cell Division		
Genetic organization		
Nuclear membrane		
Number of chromosomes		

Circular chromosome		
Histones		
Nucleolus		
RNA and protein synthesis		
The first amino acid that starts a polypeptide chain's production		
Cell structures and organelles		
Endoplasmic Reticulum		
Golgi Apparatus		
Lysosomes		
Mitochondria		
Chloroplasts		
Microtubules		
Ribosomes Localisation		
Functional Attributes		
Phagocytosis		
Pinocytosis		
Cell Movement		

Exercise 3 :

A biology professor gave his students a culture of colorless single-celled organisms. The students observed that each cell has a diameter of approximately 100 μm , a single nucleus, is rectangular in shape, and does not burst when placed in a hypotonic solution. Which statements are verified by these observations?

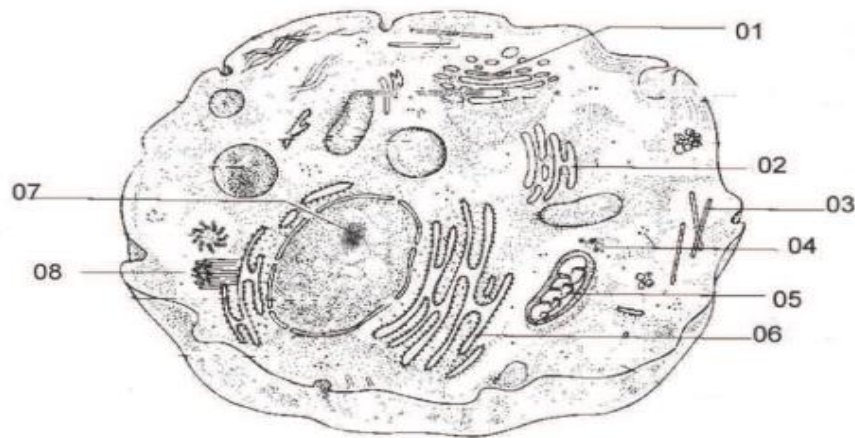
- a) These cells are eukaryotic.
- b) They are bacteria.
- c) These organisms are cells that proliferate in hot water.
- d) They are animal cells.

Exercise 4 :

1. The table below shows a liver cell, a leaf palisade parenchyma cell, and a Gram-positive bacterial cell. When the stated structures are found in the cells under consideration, mark the table with crosses.

	Liver cell	Leaf palisade parenchyma cell	Gram-positive bacterial cell
Nuclear envelope			
Cell wall			
Chloroplasts			
Mitochondria			
Ribosomes			

2. Using the number codes from the drawing, complete the table below.



Indicate	Number
A) Where the assembly of ribosome subunits takes place ;	
B) Where glycosylation of proteins and lipids takes place ;	
C) Where the synthesis of proteins coded by nuclear DNA takes place (or even begins) ;	
D) The structure that allows vesicular traffic in the cell ;	
E) The organelle responsible for the total oxidation of carbohydrates or fatty acids ;	
F) The site of lipid synthesis ;	
G) The organelle absent in plant cells.	