

# B1

## 1. Eukaryotic cells

Draw, label and describe the function of an animal cell

## 2. Eukaryotic cells

Draw, label and describe the function of a plant cell

## 3. Prokaryotic cells

Draw, label and describe the function of a bacterial cell

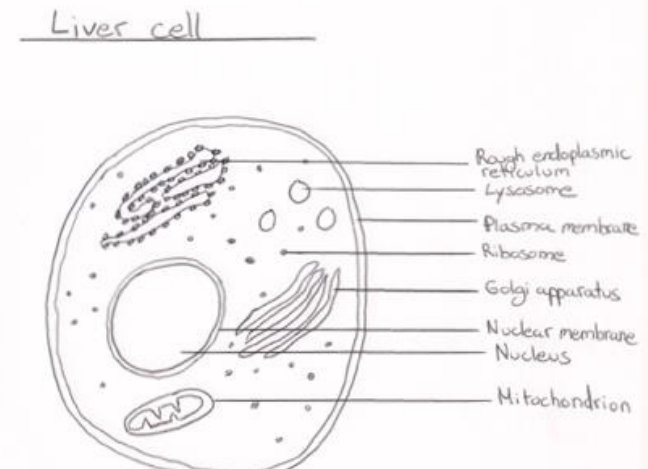
4. Draw diagrams to describe how to prepare an onion cell slide

5. Describe how to increase magnification and focus a microscope

6. State the equation for magnification



7. Describe why this is a good scientific diagram:



1. Define cell differentiation:

2. Describe the differences between these stem cells:

Adult:

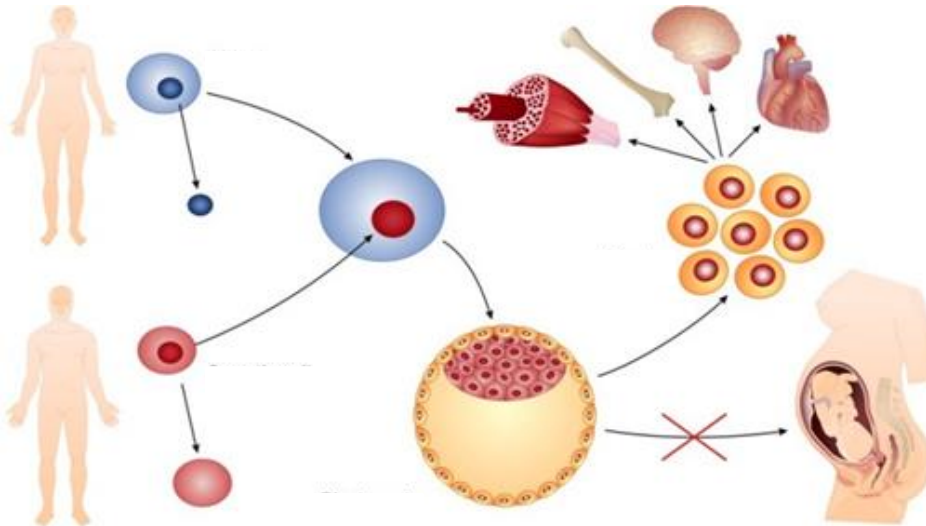
Embryonic:

Meristem:

3. Complete the table for these differentiated cells

Cell	Function	Adaptation
Sperm Cell		
Root hair cell		
Muscle cell		
Nerve cell		
Phloem cell		
Xylem cell		

4. Annotate the diagram to show how therapeutic cloning is performed



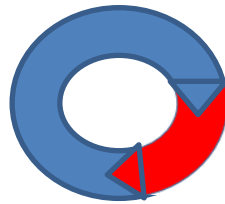
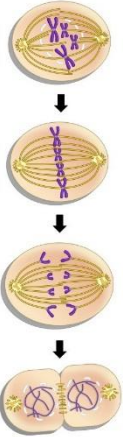
5. Describe the advantages of therapeutic cloning

6. Describe the disadvantages of therapeutic cloning

7. Describe the ethical issues with therapeutic cloning

1. What is mitosis?

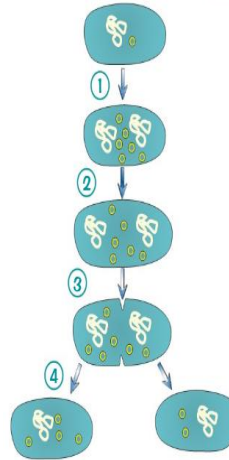
2. Label these two mitosis diagrams



3. Describe the stages of mitosis:  
- Growth & DNA replication

- Mitosis

4. TRIPLE ONLY Describe the stages of binary fission



5. TRIPLE ONLY If a bacteria has a mean division time of 20 minutes how many bacteria will be produced after 2 hours?

6. Define zone of inhibition

7 Calculate the area of the zone of inhibition:

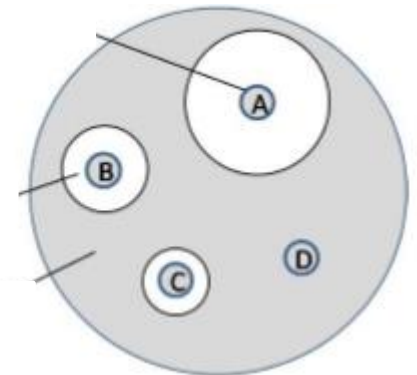
A:

B:

C:

D – was a control,  
why are controls important?

6. TRIPLE ONLY Describe stages of the aseptic technique to prevent contamination



1. Define diffusion:
2. Draw a diagram showing diffusion

3. Define active transport:
4. Draw a diagram showing active transport

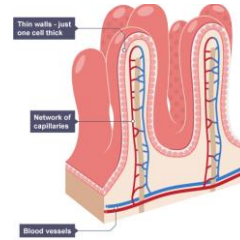
5. Define osmosis:
6. Draw a diagram showing osmosis

4. Define surface area (SA):
5. Define volume (Vol):
6. Describe how size of an organism affects its SA:vol ratio

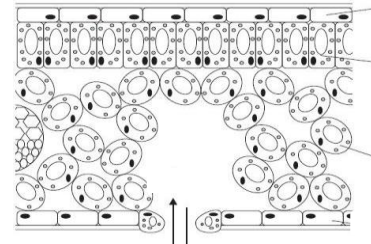
7. Describe how the exchange surfaces help the following do their function  
Alveoli:



Villi:



Leaf:



Fish gills:

