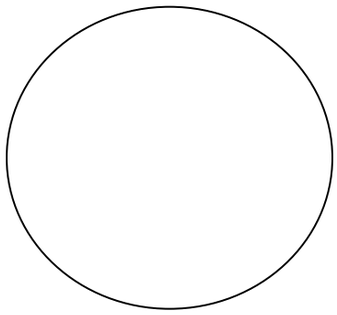
Part A: Field of View (3 Marks)

Lens	Total Magnification (obj. lens x ocular lens)
Low power objective	
Medium power objective	
High power objective	

Show your field of view calculations: (5 Marks)

Draw the ruler viewed under low power:

F of V low =



F of V med=

F of V high =

Part B: Viewing a prepared slide (3 Marks)

1. Obtain a prepared slide of an animal cell from the teacher, and starting with the low-power objective, focus the slide.
2. Draw your specimen in the circle provided. Draw the specimen on **Medium or High power**. Follow the guidelines for biological drawings discussed in class! Take a picture of your specimen under high power so that you can finish your drawing later.

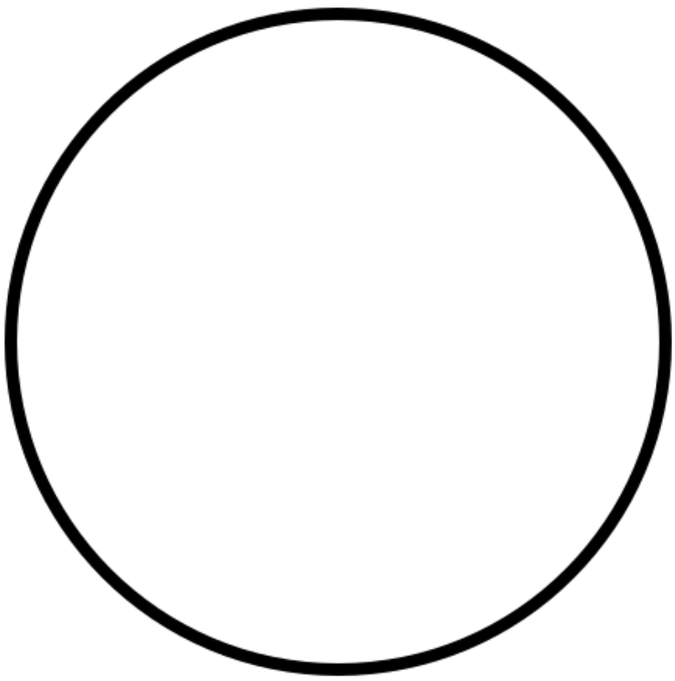


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Figure 1.1 _____

<u>Part C: Preparing a Stained Wet Mount (5 Marks)</u>

The steps for preparing a wet mount slide are:

1. Carefully remove a thin membrane from the inside curve of a piece of onion.
2. Start with a clean slide and cover slip. Place them on a sheet of white paper.
3. Hold the slide and cover slip by their edges to avoid getting your fingerprints on their surfaces.
4. Using tweezers position the cell on the center of the slide.
5. With a medicine dropper, place one drop of water on the specimen.
6. Place one drop of iodine on the specimen.
7. Hold a cover slip over the sample at a 45° angle (one edge of the cover slip should touch the surface of the slide near the sample).
8. Slowly lower the opposite edge of the cover slip over the sample. Make sure that no air bubbles form beneath the cover slip.
9. Now add a drop of iodine to one side of the cover slip and use a piece of paper towel to draw it through in underneath by touching the opposite side. **Staining a specimen will allow you to see more features.**

Provide a biological drawing of your slide under **Medium or High** power.

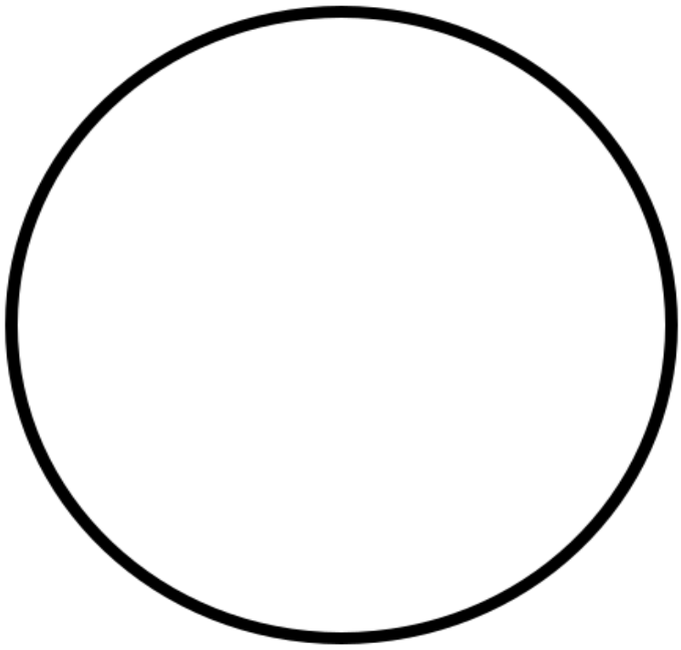

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Figure 1.3 _____

1. Imagine you are observing a live specimen. It moves right across your field of view. In which direction is it actually moving? _____ (1 Mark)

2. Which magnification has the smallest field of view that you calculated? _____ (1 Mark)
Why?

_____

_____ (1 Mark)

3. How is studying cells affected by the **use of stains**? (1 Mark)

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