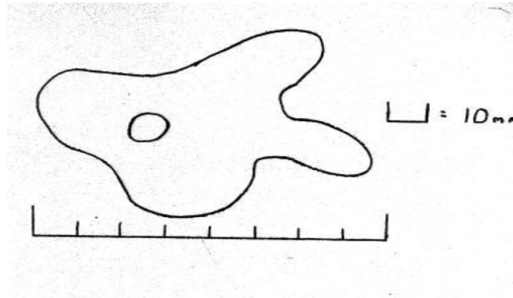


Microscope Worksheet A

Calculations Related to the Microscope

Anne viewed an amoeba under the high power 40X objective lens on her microscope. She drew the following picture of that amoeba:



She needs to calculate the magnification of her drawing. Other important information includes:

- Eyepiece lens = 5X
- Low Power Objective = 4X
- Low Power Diameter of Field of View = 4.2 mm
- Estimate of the number of times object fits across field of view (high power) = 4.5

*Anne used the longest dimension to estimate.

- a) Convert the diameter of field of view on low power to μm .
- b) Calculate the total magnification under low power and high power.
- c) Calculate the diameter of the field of view under high power.
- d) Calculate the size of the object under high power.
- e) Measure the size of the drawing. Convert to μm .
- f) Calculate the magnification of Anne's drawing.