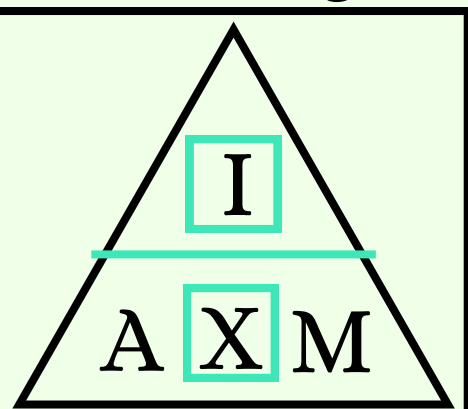
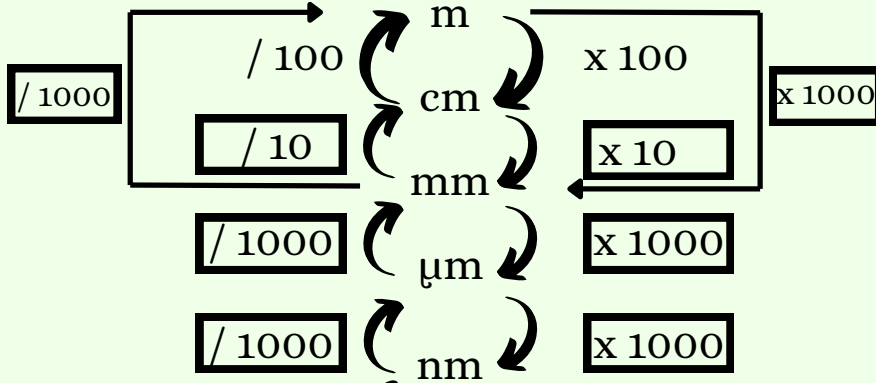


IAM triangle



- I = Image
- A = Actual
- M = Magnification

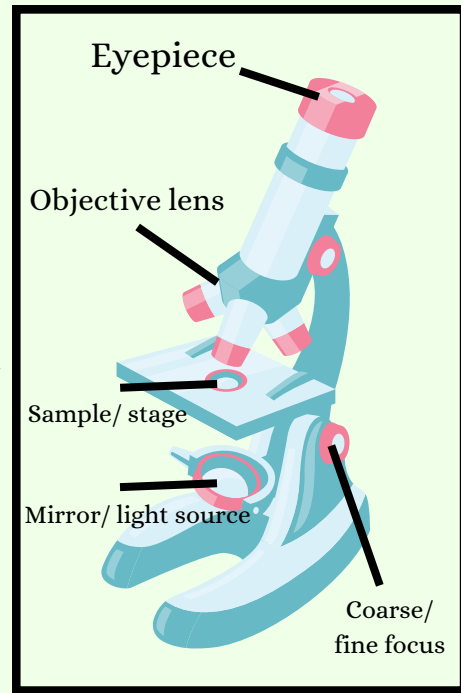
The line is "divided by"



- 1m = 100cm
- 1mm = 1000 μ m
- 5cm = 50mm
- 2 μ m = 2000nm
- 6000nm = 6 μ m
- 8000 μ m = 8mm

Application

Light microscope



Calculations

Eyepiece x Objective = Total magnification

- If an image of a cell is 20mm across at a magnification of x40, calculate the actual size of the cell.
0.5mm
- The image size of a dividing cell is 100mm. The magnification is 2000x. Calculate the actual size in μ m.
50 μ m
- The nucleus in a photograph of a cell measures 0.3cm across. If the magnification in the photograph is \times 500, what is the actual size of the nucleus in μ m?
6 μ m

Units

MICROSCOPES ANSWERS

Structure

- Related to function. Match up.
- | | |
|-------------------|----------------------------------|
| 1. Coarse focus | A. Sample placed here on a slide |
| 2. Fine focus | B. Large adjustments to focus |
| 3. Objective lens | C. Small adjustments to focus |
| 4. Stage | D. Magnifies the sample |

Comparison

Definition:
How much a sample has been made to look larger

Definition:
The ability to distinguish between two separate points

	Light	Electron
Source	Beam of light	Beam of electrons
Magnification	400-2000X	2000000X
Resolving power	200nm	0.2-10nm
Advantages	Cheap(er), used anywhere, live specimens	Greater detail, mag.&resolution. Organelles.
Drawbacks	Limited detail, magnification&resolution,	More expensive, large, specific room conditions req.