ACTUAL SIZE

POWER	Diameter of field of view
40x low	4000 μm
100x medium	2000 μm
400x high	400 μm
1000x oil	200 μm

Actual size (μm) = $\dfrac{\text{diameter of field of view (μm)}}{\text{\# of times object fits across field}}$
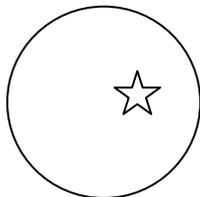
Example: looking through the microscope you see:
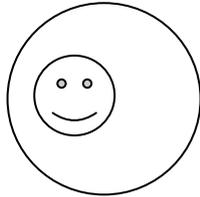
Low 40x   (2 across)

AS = $\dfrac{5000 \text{ μm}}{2}$ = 2500 μm

Example: looking through the microscope you see:

If low power = 4000μm, field of view on high power is 500 μm. 4 across stars can fit across.

$\dfrac{500 \text{ μm}}{4}$ = 125μm
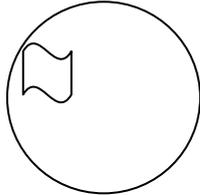
High 400x

DRAWING MAGNIFICATION

Drawing magnification = $\dfrac{\text{size of drawing of object } (\mu m)}{\text{Actual size } (\mu m)}$

(mm x 1000 = μm)

Example: You drew**:**

Actual size of object is 40μm.

You used a ruler to measure the object you drew and it was 10 mm in length (the longest way)

We must have the same units so we need to convert mm into μm.

So, 10mm x 1000 = 10,000μm

Drawing magnification = $\dfrac{10000\mu m}{40\mu m}$
= 250 times

This means that we drew the object 250 times bigger than it actually is in real life.