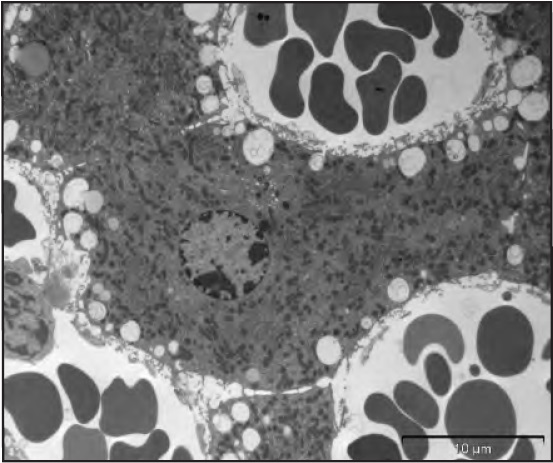
|  |  |
| --- | --- |
| DEPARTAMENTO DE  CIENCIAS NATURALES |  |
| Name and surname:…………………………………………………………… | |

**Calculating magnifications**

*FORMULAS*

*EXAMPLE 1*

To calculate the **magnification** used to establish the image right you need to apply the formula;

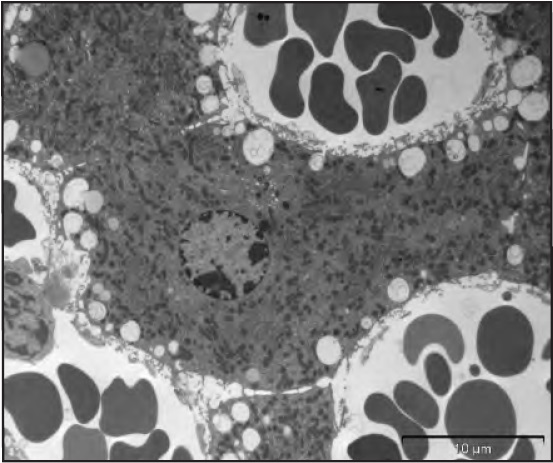
**

The **real size** of the scale bar is **10 µm**.

The **measured size** with a ruler would be **20 mm,** so that you convert to µm = 20 000µm.

= **2000x**

10 µm

* EXAMPLE 2*

10 µm

If you want to calculate **the size of the nucleus** of the liver cell you see on the image, you use the same magnification you just calculated.

**Calculate real size**

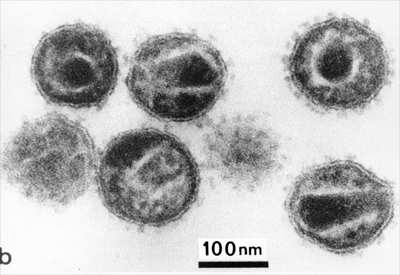
Step 1: convert to same unit (µm)

Step 2: apply formula

So real size: = 14 mm or 14000 µm

= 14000 µm/2000

= **7 µm**



*Task 1*

Which is the **magnification** of the image of the HIV viruses here on the right?

…………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………  
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……………………………………………………

*TASK 2*

Follow the instructions on pg 5 of your book to make several microscopic drawings of the animal cells, plant cells and unicellular organisms prepared for you in the lab. For some you will have to prepare the slides yourself.  
**What is the real size of the organisms/cells? Add a scale bar to each drawing.**