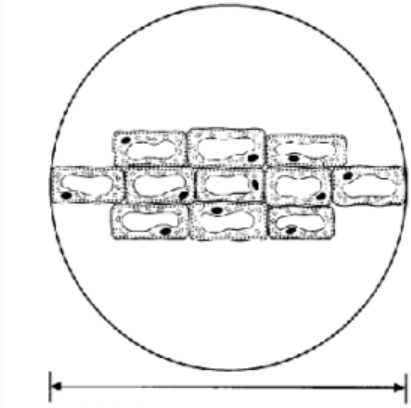
Homework 2

1. The diagram shows some plant cells as they appear when viewed under a microscope



a) Calculate the average length of the cells.

_____ micrometres. PS1

b) A microscope has a choice of three objective lenses. The total magnification depends on the magnifications of the eyepiece lens and the objective lens.

Complete the table opposite to show the magnifications of the microscope. PS1

Eyepiece lens magnification	*Objective lens magnification*	*Total magnification*
x 7	x 10	x 70
x 7		x 140
	x 40	x 280

c) The table below gives information about the size of some cells.

Type of cell	*Length of cell (micrometres)*
red blood cell	7
human skin cell	20
Elodea leaf cell	80
onion epidermal cell	100

i) Calculate the length of an onion epidermis cell in millimetres.

(1 millimetre = 1000 micrometres)

_____ millimetres PS1

ii) Using information from the table, what general conclusion could be made when comparing animal and plant cells? PS1