

**Mitosis and Meiosis Lab Worksheet Assignment**  
 Name: Steph the Unicorn Lab 1 Date: October 28, 2020

**Mitosis**

1. Use your micrograph slide to count 50 dividing cells. Tally the numbers of those 50 cells that are in each stage of mitosis (prophase, metaphase, anaphase, and telophase). Record the data below.

Number of cells in prophase \_\_\_\_\_ 40 \_\_\_\_\_ 10 pt

Number of cells in metaphase \_\_\_\_\_ 1 \_\_\_\_\_ 10 pt

Number of cells in anaphase \_\_\_\_\_ 0 \_\_\_\_\_ 10 pt

Number of cells in telophase \_\_\_\_\_ 1 \_\_\_\_\_ 10 pt

Based on this data, what conclusions could you draw as to the length of time a cell spends in each of these respective stages?

\_\_\_\_\_ It spends a lot of time in prophase \_\_\_\_\_ 10 pts

2. Select, at random, two separate areas in the zone of multiplication. In each area, count about 50 cells in the field of view, and record how many of those cells are undergoing mitosis. Record the data in Table 1 and compute the percentage of dividing cells. The average of these two fields of view will give a close approximation of the mitotic index for an onion root tip.

**Table 1. Onion Root Mitotic Index**

10 pts

Field of view	Area 1	Area 2	Area 3	Area 4	Area 5	Average
Total # of Cells	50	50	50	50	50	50
# of Cells in Mitosis	13	14	16	18	18	16.2
Percentage of Cells in Mitosis	26%	28%	32%	36%	36%	32.4%