Virtual Onion Root Tips Lab

Mitosis: Time Spent Dividing

Name: _____

Period: ____Date: _____

Hypothesis

1. Predict which phases of mitosis will take the longest and shortest. Provide a **reason** for your prediction.

Procedure

2. Go to http://www.biology.arizona.edu/cell_bio/activities/cell_cycle/cell_cycle.html *or* navigate to Ms. Richardson's Life Science website (mvhslifescience.weebly.com) → *Biology* → *Mitosis* → Capacity Matrix Resources → *Online Onion Root Tips Lab (Time Spent Dividing)*
3. Read everything. You will be responsible for knowing this information on the test.
4. Click *Next*. Read a description of each phase.
5. Click *Next*. Read the instructions. The table is on this paper.
6. Follow the directions to classify each cell into one of the phases.
7. At the end you will count up the cells found in each phase and use those numbers to predict the percentage of time a dividing cell spends in each phase. Use the formula below to calculate the percentage of time for each phase:

   # of cells in stage / total # of cells = _____ % of cells in that stage

8. Then calculate how much of a 24 hour day a dividing cell spends in each phase. Use the formula below to calculate the time for each stage:

   % of cells in stage x 1,440 minutes = _____ minutes of cell cycle spent in that stage

	Interphase	**Prophase**	**Metaphase**	**Anaphase**	**Telophase**	**Total**
# of cells						36
% of cells						100%
Time in phase (in 24 hours)						1,440 minutes

1. Use your calculations to create a **bar graph** on GRAPH PAPER or a COMPUTER of the **percentage** of time a cell spends in each stage of cell division. (Free hand graphs will not earn points.) Staple the graph to this paper.

2. In which phase does a typical cell spend the *most* **time**? **Why** do you suppose this is? What is happening during this phase?

3. In which phase does a typical cell spend the *least* **time**? **Why** do you suppose this is? What is happening during this phase?