**Mitosis**

*Activity 3*

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* Prepare slides of onion root tips if possible. If not, use prepared slides of onion root tips. If these are not available, use the images; use the internet to find more images if needed.
* Count the number of cells in each phase of mitosis. Record your number in the chart below.

|  |  |
| --- | --- |
| Cells in Mitosis | Number |
| Interphase |   |
| Prophase |   |
| Metaphase |   |
| Anaphase |   |
| Telophase |   |



* Use Excel to organize the data from all groups and to make a graph of the time in mitosis.
* Use a formula to calculate the time in each phase of mitosis; assume the onion cell divides every two hours.

Sample set of data

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|   | **Group** |  |  |  |
| **Phase** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **Total** | **Percent** | **Time In Phase (minutes)** |
| Interphase | 54 | 40 | 60 | 30 | 80 | 32 | 37 | 42 | 375 | 50% | 60.48 |
| Prophase | 43 | 63 | 32 | 25 | 4 | 1 | 5 | 12 | 185 | 25% | 29.84 |
| Metaphase | 12 | 1 | 44 | 17 | 5 | 2 | 3 | 14 | 98 | 13% | 15.81 |
| Anaphase | 5 | 3 | 7 | 7 | 1 | 3 | 3 | 8 | 37 | 5% | 5.97 |
| Telophase | 13 | 3 | 16 | 5 | 2 | 2 | 2 | 6 | 49 | 7% | 7.90 |
| *Total* | 128 | 112 | 162 | 88 | 97 | 46 | 57 | 90 | 744 |  |  |

 Sample chart of the number of cells in each phase of mitosis

Sample chart of time in each phase of mitosis