1. Draw the cell you have selected in this box.
2. Select 4 different cells that have different internal structures and draw them in the four boxes below.

|  |  |
| --- | --- |
| Stage of the Cell Cycle: | Number of Cells in the Stage: |
| Interphase |  |
| Prophase |  |
| Metaphase |  |
| Anaphase |  |
| Telophase |  |

Analysis & Conclusions:

1. What stage were the majority of the cells in?

1. What percentage of the cells were in each stage?

Interphase

Prophase

Metaphase

Anaphase

Telophase

1. What evidence shows that mitosis is a continuous process, not a series of separate events?
2. The onion plant began as a single cell. That cell had X number of chromosomes. (The exact number does not matter, we will just call that number “N”.) How many chromosomes are in each of the cells that you observed? (Give the answer in terms of N.)
3. How do you know?
4. If this onion would reproduce sexually, it would need to produce sperm and/or eggs by the process of meiosis. After meiosis, how many chromosomes would be in each sex cell (in terms of N)?
5. If this onion would complete the process of sexual reproduction (fertilizing an egg cell), how many chromosomes would be in the zygotes that are produced (in terms of N)?