

Mitosis Worksheet

Observations and Analysis

<div data-bbox="256 340 444 382" style="border: 1px solid black; padding: 2px; width: fit-content; margin: 0 auto;">Interphase</div> <div data-bbox="212 394 485 663" style="border: 1px solid black; width: 168px; height: 128px; margin: 5px auto;"></div>	<div data-bbox="686 340 875 382" style="border: 1px solid black; padding: 2px; width: fit-content; margin: 0 auto;">Prophase</div> <div data-bbox="643 394 915 663" style="border: 1px solid black; width: 168px; height: 128px; margin: 5px auto;"></div>	<div data-bbox="1117 340 1305 382" style="border: 1px solid black; padding: 2px; width: fit-content; margin: 0 auto;">Prometaphase</div> <div data-bbox="1073 394 1346 663" style="border: 1px solid black; width: 168px; height: 128px; margin: 5px auto;"></div>
<div data-bbox="256 695 444 737" style="border: 1px solid black; padding: 2px; width: fit-content; margin: 0 auto;">Metaphase</div> <div data-bbox="212 749 485 1018" style="border: 1px solid black; width: 168px; height: 128px; margin: 5px auto;"></div>	<div data-bbox="686 695 875 737" style="border: 1px solid black; padding: 2px; width: fit-content; margin: 0 auto;">Anaphase</div> <div data-bbox="643 749 915 1018" style="border: 1px solid black; width: 168px; height: 128px; margin: 5px auto;"></div>	<div data-bbox="1117 695 1305 737" style="border: 1px solid black; padding: 2px; width: fit-content; margin: 0 auto;">Telophase</div> <div data-bbox="1073 749 1346 1018" style="border: 1px solid black; width: 168px; height: 128px; margin: 5px auto;"></div>

Questions

1. Explain why root tip cells are selected for the study of mitosis.

2. Describe the principal cellular “events” that occur in each phase of the cell cycle.

3. What is the role of the kinetochore? Is it necessary for mitosis? Defend your answer.

4. How would the results for the percent of cells in each phase of the cell cycle have been different if your observations had not been restricted to the area of the root tip that is actively dividing?

5. How do the cells at the root cap differ from the mature cells away from the root cap?

