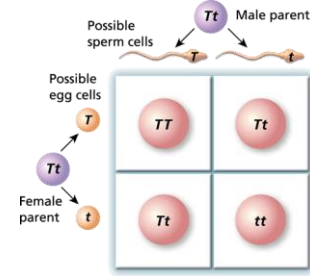


Name: _____ Date: _____

Meiosis: Stop the Process Notes

Chapter 14, Section 5, The Cell and Inheritance, p. 546-550.

Directions: read the prompt, and then read the specified passage. Use the passage to help you answer the prompt, recording your answer in the appropriate box.

<p>Read to the bottom of page 546.</p> <p>1. What did Walter Sutton believe was the key to understanding how offspring have traits similar to their parents?</p>	<p>Read to “Genes on Chromosomes,” page 547.</p> <p>2. Describe two observations Sutton made regarding grasshopper sex cells.</p> <ul style="list-style-type: none"> • . • . 								
<p>Read to the bottom of page 547.</p> <p>3. What is the chromosome theory of inheritance?</p>	<p>Read to “What Happens During Meiosis,” page 548.</p> <p>4. What is meiosis?</p>								
<p>Read to the bottom of page 548.</p> <p>5. As a result of meiosis, the final cells have _____ as many chromosomes as the parent cell.</p> <p>Fill in the number of chromosomes that would result from meiosis in each of the parent cells:</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="padding: 5px;">Parent Cells Chromosomes</th> <th style="padding: 5px;">after Meiosis Chromosomes</th> </tr> </thead> <tbody> <tr> <td style="text-align: center; padding: 5px;">4</td> <td></td> </tr> <tr> <td style="text-align: center; padding: 5px;">46 (human)</td> <td></td> </tr> <tr> <td style="text-align: center; padding: 5px;">24 (grasshopper)</td> <td></td> </tr> </tbody> </table>	Parent Cells Chromosomes	after Meiosis Chromosomes	4		46 (human)		24 (grasshopper)		<p>Read the first paragraph of page 549.</p> <p>A Punnett Square is chart that shows all the possible combinations of alleles that can result from a genetic cross (sperm + egg).</p> <p>6. A Punnett Square is a shorthand way to show events that occur during _____.</p> <div style="text-align: right; margin-top: 10px;">  </div>
Parent Cells Chromosomes	after Meiosis Chromosomes								
4									
46 (human)									
24 (grasshopper)									
<p>Read to the bottom of page 549.</p> <p>7. If the male parent cell is Tt, what chromosome alleles could the sperm cells possibly have?</p>	<p>Read the first sentence on page 550.</p> <p>8. How many TOTAL chromosomes do human body cells contain?</p>								
<p>Read the first paragraph on page 550.</p> <p>9. How are the genes lined up in a pair of chromosomes?</p>	<p>Read to the bottom of page 550.</p> <p>10. Why is it important that sex cells have <i>half</i> the number of chromosomes as body cells?</p>								



Look back at Figure 28, on pages 548-549.

For each of the following events, give each a **label** (Beginning, Meiosis I, Meiosis II, and End), draw a **picture** showing what the cell(s) look like at that particular stage, and put them in chronological (**number**) order.

<p>Label: _____ # _____</p> <p>Event: The chromosomes move to the center of the cell. The centromeres separate and single chromatids move to opposite ends.</p> <p>Picture:</p>	<p>Label: _____ # _____</p> <p>Event: Two cells form, each with half the number of chromosomes. Each chromosome still has two chromatids.</p> <p>Picture:</p>
<p>Label: _____ # _____</p> <p>Event: Four sex cells form with half the number of chromosomes as the parent cell.</p> <p>Picture:</p>	<p>Label: _____ # _____</p> <p>Event: The chromosomes are copied.</p> <p>Picture:</p>