CHAPTER 11.3: Cell Division

1. Label and make notes on the diagram below to describe the organization of the eukaryotic chromosome, based off of Figure 11.9.

2. Define the following terms.
   a. karyotype _________________________________________________________________
   b. haploid __________________________________________________________________
   c. diploid __________________________________________________________________
   d. homologous _____________________________________________________________
   e. centromere ______________________________________________________________
   f. chromatid _______________________________________________________________
3. Make notes on the following diagram to distinguish between homologous chromosomes and sister chromatids.

4. Why is DNA coiled into chromosomes in eukaryotes?

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5. Explain the role of the centromere, kinetochores, and the microtubules in mitosis.

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6. Although these are not the diagrams from your text, I think they illustrate the stages of mitosis quite well. Label the stages and list the key features of each stage.

<table>
<thead>
<tr>
<th>Stage 1</th>
<th>Stage 2</th>
<th>Stage 3</th>
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</thead>
<tbody>
<tr>
<td>[Diagram of Stage 1]</td>
<td>[Diagram of Stage 2]</td>
<td>[Diagram of Stage 3]</td>
</tr>
</tbody>
</table>
7. How does cytokinesis differ in animal and plant cells? Label the diagrams below.

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