**Section 7.2 Meiosis – Page 206 – 207**

**304-11 Illustrate and describe the basic process of mitosis and meiosis.**

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: April 4, 2018**

**Stages of Meiosis**

**Page 206 – 207 of Textbook**

Chromosomes that are similar in size, shape, length, and gene arrangement are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_chromosomes. Review/read info below FIGURE 1

Organisms that reproduce sexually contain two types of cells: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cells and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cells.

Cells that reproduce only by normal cell division and mitosis called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cells. Examples: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cells and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cells

When somatic cells divide each daughter cell is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to the mother cell and has the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ number of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Reproductive cells produce \_\_\_\_\_\_\_\_\_\_\_\_\_ cells that contain only \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the number of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ through the process of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Meiosis involves two cell divisions that produce \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cells.

During the first division, called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ chromosomes move to the opposite poles of the dividing cell. During this division, a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cell (\_\_\_\_\_\_\_\_) becomes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cells (\_\_\_\_\_).

In the second phase (division), \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are divided.

**FIGURE 2 (see information provided below Figure 2)**

During the first division, the chromosome number is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in half.

In the second division, the chromosomes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_and move to the opposite poles.

**FIGURE 3** – Copy the diagram from question #4 in your textbook for both mitosis and meiosis on page 207 below (provide labels also).

**Questions on page 207 - #1 to 8**

**Use the information from page 206 – 207 (notes) to answer the following questions.**

#1. (a) How do somatic cells and reproductive cells differ from each other?

(b) How are they similar?

2. What are homologous chromosomes?

3. Describe the two divisions of meiosis.

4. Use Figure 3 (or video shown in class) to compare meiosis and mitosis.

5. Why is meiosis necessary?

6. A dog has 78 chromosomes in each somatic cell. How many chromosomes would you find in each of its sex cells?

7. Do homologous chromosomes have the same number of genes? Explain why or why not?

8. Do homologous chromosomes have identical genes? Support your answer.