**Meiosis** (p. 120 – 121; 144 – 149)

**I. Formation Of Haploid Cells**

 **1. Define the term meiosis.**

 Meiosis –

 **2. What does it mean when two sets of chromosomes are homologous?** (p. 120)

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 **3. Circle the letter of each way to describe a diploid cell.** (p. 121)

 a. 2N

 b. Contains two sets of homologous chromosomes.

 c. Contains a single set of homologous chromosomes.

 d. A gamete.

 **4. What are the two distinct divisions of meiosis?**

 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 **5. Before meiosis begins, what happens to DNA?**

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 **6. Match each stage of meiosis with the correct occurrences.**

 1. \_\_\_\_\_\_\_\_ Prophase I A. Chromosomes gather at poles, Cytoplasm divides

 2. \_\_\_\_\_\_\_\_ Metaphase I B. Nuclear envelope forms, Cytoplasm divides

 3. \_\_\_\_\_\_\_\_ Anaphase I C. Homologous chromosome pairs (tetrads) move to equator

 4. \_\_\_\_\_\_\_\_ Telophase I D. New spindles form around chromosomes

 5. \_\_\_\_\_\_\_\_ Prophase II E. Chromatids move to opposite poles of the cell

 6. \_\_\_\_\_\_\_\_ Metaphase II F. Nuclear envelope breaks down, Crossing-over occurs

 7. \_\_\_\_\_\_\_\_ Anaphase II G. Homologous chromosomes move to opposite poles

 8. \_\_\_\_\_\_\_\_ Telophase II H. Chromosomes line up at equator

**II. Meiosis & Genetic Variation**

 **1. Define the term independent assortment.**

 Independent Assortment –

 **2. How many gene combinations can be made from a cell containing 23 chromosome pairs?**

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 **3. Circle the number of chromatids in a tetrad.** (Not in the book.)

 a. 8 b. 6 c. 4 d. 2

 **4. Crossing over between tetrads produces an unlimited number of genetic possibilities.**

 Circle One : True False

 **5. Meiosis reduces the rate at which evolution of populations occur.**

 Circle One : True False

**III. Meiosis & Gamete Formation**

 **1. Match the following terms with the correct definitions.**

 1. \_\_\_\_\_\_\_\_ Gametogenesis A. Gamete production in female animals

 2. \_\_\_\_\_\_\_\_ Spermatogenesis B. Formation of gametes

 3. \_\_\_\_\_\_\_\_ Oogenesis C. Gamete production in male animals

 **2. Define the following terms.**

 Sperm –

 Ovum –

 **3. The diploid cell that enters meiosis becomes 4 haploid cells at the end of meiosis.**

 Circle One : True False

 **4. What are polar bodies?**

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_