

## Cell Biology

### Life of a Eukaryotic Cell

Name: \_\_\_\_\_

Period: \_\_\_\_\_

Use Chapter 5, Section 2 of your textbook to answer the questions below.

#### Section 2: The Cell Cycle

1. [review from p.152] DNA of a cell is organized into structures called \_\_\_\_\_.

#### Eukaryotic Cells and Their DNA (p.153)

2. Unlike prokaryotic cells, eukaryotic cells have \_\_\_\_\_ chromosomes.

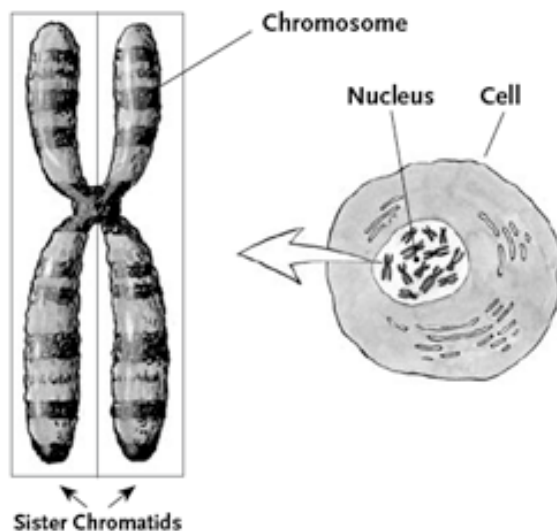
3. Eukaryotes have more \_\_\_\_\_ than prokaryotes.

4. How many chromosomes do humans have? \_\_\_\_\_

5. Look at Figure 2. How many sets (pairs) of chromosomes do humans have? \_\_\_\_\_

\_\_\_\_\_ 6. What are pairs of similar chromosomes called?

- |                      |                           |
|----------------------|---------------------------|
| a. prokaryotic pairs | b. homologous chromosomes |
| c. DNA chromosomes   | d. eukaryotic pairs       |



#### Making More Eukaryotic Cells

Match the stage of the eukaryotic cell cycle to what happens.

- |                       |   |
|-----------------------|---|
| _____ 7. first stage  | a. cell splits into two daughter cells                  |
| _____ 8. second stage | b. cell grows and copies its organelles and chromosomes |
| _____ 9. third stage  | c. chromatids separate                                  |

10. When cells are copied, the two copies are called \_\_\_\_\_.

11. The process of separating chromosomes is called \_\_\_\_\_.

12. A fruit fly has 8 chromosomes. How many chromosomes will a fruit fly daughter cell have? \_\_\_\_\_