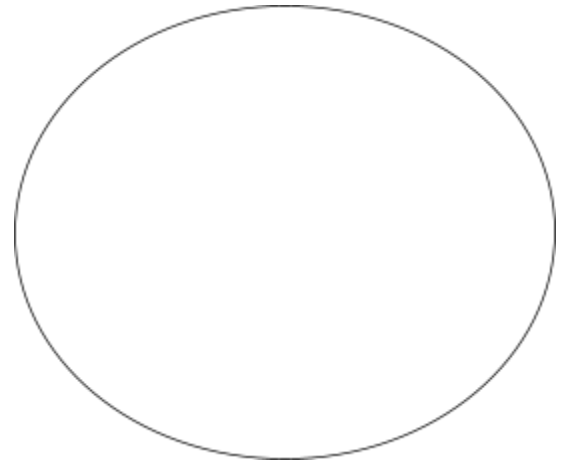


Name _____

7S – Cellular Reproduction Study Guide

This study guide is a **GUIDE and **NOT** the complete test. Please be sure to use notes, old assessments and worksheets as part of review.*

1. Draw the cell cycle model from your notes as a circle to the left; label the phases and interphase to the right (include: G1, S, G2, and M)
2. Draw **chromosomes vs chromatin** below; write a caption that explains why they're different



3. Define **sister chromatids**. Draw a picture and show the **centromere**

4. Draw a pair of **homologous chromosomes** (where did each of them come from? Show the same gene on each?)

5. Compare and contrast somatic (body) cells and gametes in the chart below

Type of Cell	Definition / Examples	Result of what type of cell division?	Haploid or Diploid

6. In order, label the phases (G1, G2, S, M) of the cell cycle and a definition of what happens during each phase (G0 is done for you)

Cell Cycle Phase	Definition
G0 (OPTIONAL)	If a cell is not prepared for division or has severe defects, it can choose to go to G0 (also called terminal differentiation) instead of continuing the cell cycle and dividing.

7. What is the importance of having cell cycle “check-points?”

8. List the three major cell-cycle checkpoints and when they occur?

Cell Cycle Checkpoint / When it Happens	What does it check for?

9. How many TOTAL chromosomes do humans have? How many homologous pairs is this?

10. What is the end result of mitosis. Which type of cells perform this?

11. What is the end result of meiosis. Which type of cells perform this.

12. Provide **two similarities AND two differences** between mitosis and meiosis

Similarities	Differences

13. LIST and DEFINE the three main factors in Meiosis that lead to **genetic variation**.

14. ******Review your pictures in your guided notes about the chromatid movement in Mitosis and Meiosis**

15. Describe what's happening in each stage of mitosis

<u>Name</u>	<u>What Happens?</u>
Prophase	
Metaphase	
Anaphase	
Telophase	
Cytokinesis	

16. What is the difference of cytokinesis in plant cells and animal cells? Draw a diagram?

17. What is fertilization? What does it produce? (you may need to research this one)

18. What happens if a cell determines at the S checkpoint that DNA damage is irreparable?

19. Draw a diagram of crossing over. Write in 1-3 sentences what is happening during crossing over and what is the result.