

DUE DATE _____

**2nd Semester Final Exam Review- PRACTICE TEST: MITOSIS AND MEIOSIS
Units 11 & 12**

- ___ 1. As a cell grows, it
 - a. places more demands on its DNA.
 - b. uses up food and oxygen more quickly.
 - c. has more trouble moving enough materials across its cell membrane.
 - d. all of the above
- ___ 2. Compared to small cells, large cells have more trouble
 - a. dividing.
 - b. producing daughter cells.
 - c. moving needed materials in and waste products out.
 - d. making copies of their DNA.
- ___ 3. The process by which a cell divides into two daughter cells is called
 - a. cell division.
 - b. metaphase.
 - c. interphase.
 - d. mitosis.
- ___ 4. When during the cell cycle are chromosomes visible?
 - a. only during interphase
 - b. only when they are being replicated
 - c. only during cell division
 - d. only during the G₁ phase
- ___ 5. Which of the following is a phase in the cell cycle?
 - a. G₁ phase
 - b. G₂ phase
 - c. M phase
 - d. all of the above
- ___ 6. Which pair is correct?
 - a. G₁ phase, DNA replication
 - b. G₂ phase, preparation for mitosis
 - c. S phase, cell division
 - d. M phase, cell growth
- ___ 7. When during the cell cycle is a cell's DNA replicated?
 - a. G₁ phase
 - b. G₂ phase
 - c. S phase
 - d. M phase
- ___ 8. Which event occurs during interphase?
 - a. The cell grows.
 - b. Centrioles appear.
 - c. Spindle fibers begin to form.
 - d. Centromeres divide.
- ___ 9. Which of the following is a correct statement about the events of the cell cycle?
 - a. Little happens during the G₁ and G₂ phases.
 - b. DNA replicates during cytokinesis.
 - c. The M phase is usually the longest phase.
 - d. Interphase consists of the G₁, S, and G₂ phases.
- ___ 10. The cell cycle is the
 - a. series of events that cells go through as they grow and divide.
 - b. period of time between the birth and the death of a cell.
 - c. time from prophase until cytokinesis.
 - d. time it takes for one cell to undergo mitosis.

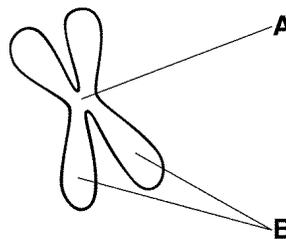


Figure 10–2

- ___ 11. The structure labeled A in Figure 10–2 is called the
- centromere.
 - centriole.
 - sister chromatid.
 - spindle.
- ___ 12. The structures labeled B in Figure 10–2 are called
- centromeres.
 - centrioles.
 - sister chromatids.
 - spindles.
- ___ 13. The first phase of mitosis is called
- prophase.
 - anaphase.
 - metaphase.
 - interphase.
- ___ 14. During which phase of mitosis do the chromosomes line up along the middle of the dividing cell?
- prophase
 - telophase
 - metaphase
 - anaphase
- ___ 15. Which of the following represents the phases of mitosis in their proper sequence?
- prophase, metaphase, anaphase, telophase
 - interphase, prophase, metaphase, anaphase, telophase
 - interphase, prophase, metaphase, telophase
 - prophase, metaphase, anaphase, telophase, cytokinesis
- ___ 16. What is the role of the spindle during mitosis?
- It helps separate the chromosomes.
 - It breaks down the nuclear membrane.
 - It duplicates the DNA.
 - It divides the cell in half.
- ___ 17. The two main stages of cell division are called
- mitosis and interphase.
 - synthesis and cytokinesis.
 - the M phase and the S phase.
 - cytokinesis and mitosis.
- ___ 18. One difference between cell division in plant cells and in animal cells is that plant cells have
- centrioles.
 - centromeres.
 - a cell plate.
 - chromatin.
- ___ 19. During normal mitotic cell division, a parent cell having four chromosomes will produce two daughter cells, each containing
- two chromosomes.
 - four chromosomes.
 - eight chromosomes.
 - sixteen chromosomes.
- ___ 20. Which of the following explains why normal cells grown in a petri dish tend to stop growing once they have covered the bottom of the dish?
- The cells lack cyclin.
 - The petri dish inhibits cell growth.
 - Contact with other cells stops cell growth.
 - Most cells grown in petri dishes have a defective p53.
- ___ 21. In eukaryotic cells, the timing of the cell cycle is regulated by
- the centrioles.
 - cyclins.
 - the spindle.
 - all of the above
- ___ 22. Cancer is a disorder in which some cells have lost the ability to control their
- size.
 - spindle fibers.
 - growth rate.
 - surface area.
- ___ 23. The number of chromosomes in a gamete is represented by the symbol
- Z.
 - X.
 - N.
 - Y.
- ___ 24. If an organism's diploid number is 12, its haploid number is
- 12.
 - 6.
 - 24.
 - 3.
- ___ 25. Gametes have
- homologous chromosomes.
 - twice the number of chromosomes found in body cells.
 - two sets of chromosomes.
 - one allele for each gene.

- ___ 26. Gametes are produced by the process of
- a. mitosis.
 - b. meiosis.
 - c. crossing-over.
 - d. replication.
- ___ 27. Chromosomes form tetrads during
- a. prophase I of meiosis.
 - b. metaphase I of meiosis.
 - c. interphase.
 - d. anaphase II of meiosis.
- ___ 28. What happens between meiosis I and meiosis II that reduces the number of chromosomes?
- a. Crossing-over occurs.
 - b. Metaphase occurs.
 - c. Replication occurs twice.
 - d. Replication does not occur.
- ___ 29. Unlike mitosis, meiosis results in the formation of
- a. diploid cells.
 - b. haploid cells.
 - c. 2N daughter cells.
 - d. body cells.
- ___ 30. Unlike mitosis, meiosis results in the formation of
- a. two genetically identical cells.
 - b. four genetically different cells.
 - c. four genetically identical cells.
 - d. two genetically different cells.
- ___ 31. Which of the following assort independently?
- a. chromosomes
 - b. genes on the same chromosome
 - c. multiple alleles
 - d. codominant alleles
- ___ 32. Linked genes
- a. are never separated.
 - b. assort independently.
 - c. are on the same chromosome.
 - d. are always recessive.
- ___ 33. Gene maps are based on
- a. the frequencies of crossing-over between genes.
 - b. independent assortment.
 - c. genetic diversity.
 - d. the number of genes in a cell.
- ___ 34. The farther apart two genes are located on a chromosome, the
- a. less likely they are to be inherited together.
 - b. more likely they are to be linked.
 - c. less likely they are to assort independently.
 - d. less likely they are to be separated by a crossover during meiosis.