Name: _____ Class: _____ Date: _____ ID: A

Meiosis Quiz

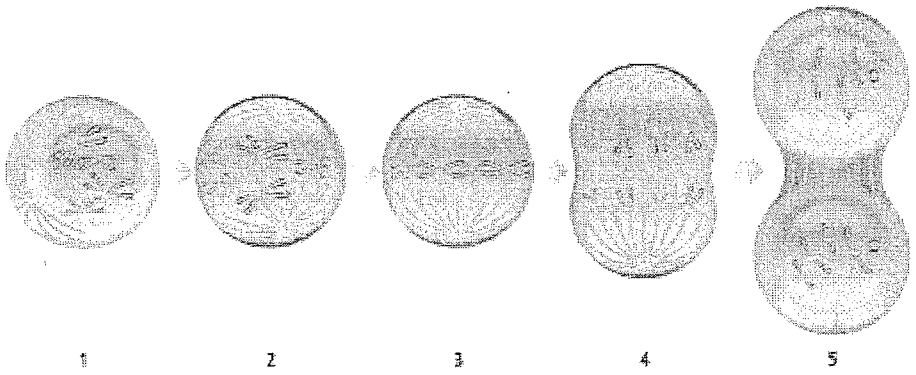
Multiple Choice
Identify the choice that best completes the statement or answers the question.

____ 1. New body cells (e.g., skin, muscle) are produced by
a. eggs.
b. fertilization.
c. meiosis.
d. mitosis.

____ 2. Mitosis produces a(n)
a. egg.
b. gamete.
c. pair of identical cells.
d. sperm.

____ 3. Mitosis is the process by which
a. a body cell makes an exact duplicate of itself.
b. gametes are produced in the ovaries or testes.
c. sperm are produced.
d. a zygote is produced.

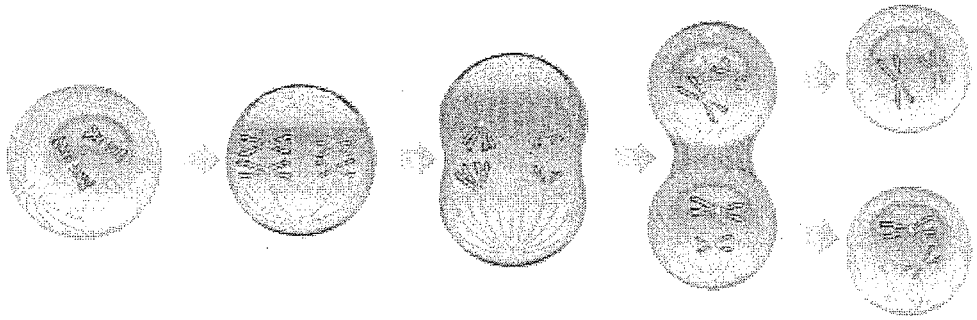
____ 4. The diagram below shows



a. the cell cycle.
b. meiosis.
c. the steps of metaphase.
d. mitosis.

____ 5. Most of the cell's growth occurs during
a. cytokinesis.
b. interphase.
c. prophase.
d. telophase.

____ 6. Each inherited characteristic is determined by genes passed on from
a. the mother and her parents.
b. the father and his parents.
c. the father and mother.
d. the mother only.



____ 7. What happens prior to the event shown in the illustration above?
a. A copy of each chromosome is made.
b. The cell is fertilized.
c. Egg and sperm cells are formed.
d. All of the above.

____ 8. Which process is shown in the illustration above?
a. fertilization
b. genetic engineering
c. meiosis
d. mitosis

____ 9. How many chromosomes do human beings have in each of their body cells?
a. 23
b. 46
c. 52
d. 92

____ 10. Which process produces gametes?
a. meiosis
b. mitosis
c. fertilization
d. variation

____ 11. How many chromosomes are there in the nucleus of a human sperm cell?
a. three
b. 22
c. 23
d. 46

____ 12. Which of the following is a source of variation in sexual reproduction?
a. The random division of chromosome pairs into gametes
b. The duplication of genetic material before mitosis
c. The combination of gametes from two parents
d. Both A and C

____ 13. Which of these is a gamete?
a. embryo
b. sperm
c. spore
d. zygote

____ 14. A cell produced by meiosis has
a. half as many chromosomes as the mother cell.
b. twice as many chromosomes as the mother cell.
c. the same number of chromosomes as the mother cell.
d. the same number of chromosomes as the mother cell, but each cell is half its original size.

____ 15. Sperm and eggs are produced by
a. asexual reproduction.
b. fertilization.
c. meiosis.
d. mitosis.

____ 16. Which statement below best describes the process of meiosis?
a. Skin cells are replaced as they wear away.
b. Muscle cells turn to fat cells as a result of a lack of exercise.
c. A sperm penetrates an egg to form a zygote.
d. Cells with only half the original number of chromosomes are produced.

____ 17. Meiosis is often referred to as reduction division because
a. the daughter cells are smaller than the mother cell.
b. the total number of cells is reduced after meiosis.
c. the daughter cells have half the number of chromosomes.
d. the total number of chromosomes is reduced by two.

____ 18. New body cells (e.g., skin, heart, nerve) are produced by
a. eggs.
b. fertilization.
c. meiosis.
d. mitosis.

____ 19. Mitosis produces a(n)
a. egg.
b. gamete.
c. pair of identical cells.
d. sperm cell.

____ 20. Segments of DNA that are parts of non-sister chromatids are sometimes exchanged in a process referred to as
a. chromatid mutation.
b. crossing over.
c. DNA exchange.
d. gene swapping.

____ 21. A cell that has two sets of chromosomes is described as being
a. complete.
b. diploid.
c. haploid.
d. zygote.

____ 22. A cell that has one set of chromosomes, which were contributed from a single parent, is described as being
a. complete.
b. diploid.
c. fertilized.
d. haploid.

____ 23. The penetration of an egg by a sperm cell is referred to as
a. intercourse.
b. fertilization.
c. penetration.
d. pollination.

____ 24. After fertilization occurs, the chromosomes from one parent match up with the chromosomes from the other parent. These matching chromosomes are described as
a. homologous.
b. mated.
c. offspring.
d. partnered.

Matching

Identify the stage of meiosis being described in each of the following statements. Each stage is identified only once.

a. anaphase I
b. anaphase II
c. cytokinesis
d. interkinesis
e. meiosis
f. metaphase I
g. metaphase II
h. mitosis
i. prophase I
j. prophase II
k. telophase I
l. telophase II

____ 25. Chromosomes uncoil, and nuclear membranes form around four new nuclei.

____ 26. The two nuclei and the cell contents separate into two daughter cells.

____ 27. Each pair of chromatids splits to form two independent chromosomes.

____ 28. Paired chromatids line up in the middle of the cell.

____ 29. The chromosomes coil and homologous chromosomes move toward each other.

____ 30. Pairs of homologous chromosomes move to the middle of the cell.