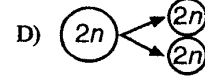
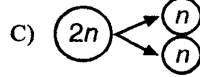
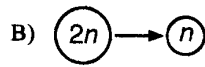
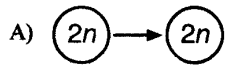


## Cell Reproduction Practice Test

1. Normally, a complete set of chromosomes ( $2n$ ) is passed on to each daughter cell as a result of
- A) transcription  
B) meiotic cell division  
C) translation  
D) mitotic cell division

2. Which diagram most correctly represents the process of mitosis?



3. The chromosome number of a cell produced by mitotic cell division is represented by " $2n$ ". If that cell had been produced by meiotic cell division, its chromosome number would be represented by
- A)  $4n$   
B)  $2n$   
C)  $n$  or  $1n$   
D)  $1/2n$

4. In most multicellular animals, meiotic cell division occurs in specialized organs known as
- A) kidneys  
B) cytoplasmic organelles  
C) gametes  
D) gonads

5. Which statement best describes a difference between cell division in plant and animal cells?
- A) In plant cells, centrosomes have a distinct role in spindle formation, while in animal cells centrosomes do not function during cell division.

B) In animal cells, replication of chromosomes occurs during the non-dividing phase, while in plant cells replication occurs when the nuclear membrane disintegrates.

C) In animal cells, cytoplasmic division is accomplished by a "pinching in" of the cell membrane, while in plant cells a cell plate is synthesized.

D) In plant cells, cytoplasmic division is accomplished by a "pinching in" of the cell membrane, while in animal cells a cell plate is synthesized.

6. In humans, which cell is produced most directly by mitotic cell division?

A) a skin cell

B) a sperm cell

C) an egg cell

D) a zygote

7. Normally, each cell of a specific organism contains 64 chromosomes. However, some cells in that organism may each contain only 32 chromosomes as a result of

A) meiotic cell division

C) mitotic cell division

B) transcription

D) translation

8. Only one member of each pair of homologous chromosomes is normally found in a

A) multicellular embryo

C) cheek cell

B) zygote

D) gamete

- 9) Structures that hold chromatids together in double-stranded chromosomes are known as

A) mitochondria

B) gametes

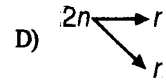
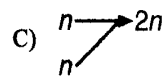
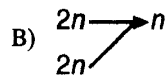
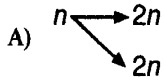
C) spindle fibers

D) centromeres

## Cell Reproduction Practice Test

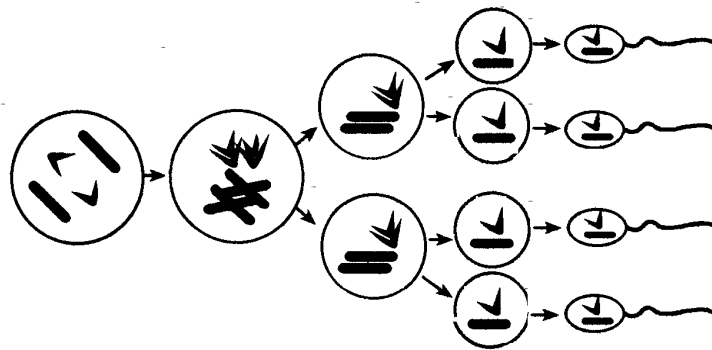
10. When a cell with 24 chromosomes divides by mitotic cell division, the resulting daughter cells will each have a maximum chromosome number of
- A) 48                      B) 12                      C) 6                      D) 24

11. In the diagrams below, "2n" represents the diploid number of chromosomes in a cell of an organism, and "n" represents the monoploid number. Which diagram represents fertilization?



12. In a fruit fly in which the diploid number of chromosomes is "8", the chromosome number in each gamete is normally
- A) 4                      B) 2                      C) 16                      D) 8

13. Which process is represented by the diagram below?



- A) mitosis  
B) gametogenesis

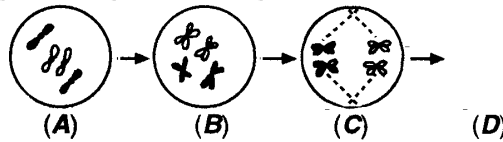
- C) asexual reproduction  
D) fertilization

14. Each strand of a double-stranded chromosome is known as
- A) chromatid                      B) spindle fiber                      C) centromere                      D) centriole
15. During the normal meiotic division of a diploid cell, the change in chromosome number that occurs is represented by
- A)  $2n \rightarrow n$                       B)  $2n \rightarrow 4n$   
C)  $n \rightarrow n$                       D)  $4 \rightarrow n$

16. Normal mitotic cell division results in each daughter cell having
- A) the same number and kinds of chromosomes as the parent cell  
B) the same number but different kinds of chromosomes as the parent cell  
C) twice the number of chromosomes as the parent cell  
D) half the number of chromosomes as the parent cell

## Cell Reproduction Practice Test

17. Cancer is a disease characterized by the
- A) unlimited production of abnormal gametes
  - B) uncontrolled replication of the mitochondria
  - C) limited production of normal zygotes
  - D) uncontrolled division of abnormal cells
18. In animals, the process which results in monoploid gametes is known as
- A) mitosis
  - B) fertilization
  - C) meiosis
  - D) fission
19. The diagram below represents the sequence of events in a cell undergoing normal meiotic cell division.



Which diagram most likely represents stage D of this sequence?

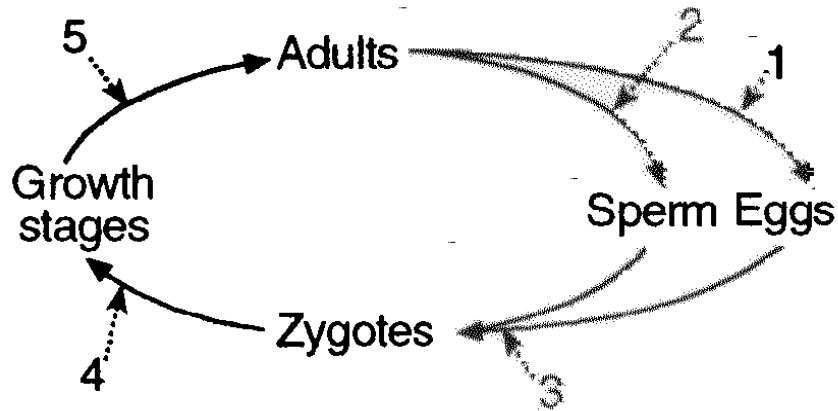


20. Asexual reproduction of diploid organisms normally results in a new organism that contains cells with
- A) more chromosomes than are found in the cells of the parent
  - B) the "2n" number of chromosomes
  - C) fewer chromosomes than are found in the cells of the parent
  - D) the n number of chromosomes
21. Which event occurs in the cytoplasmic division of plant cells but not in the cytoplasmic division of animal cells?
- A) centriole formation
  - B) cell plate formation
  - C) chromosome replication
  - D) centromere replication
22. The diagram below represents a chromosome. Letters A and B indicate structures known as the
- A) chloroplast and mitochondria
  - B) centriole and centrosome
  - C) chromatid and centromere
  - D) spindle and cell plate



## Cell Reproduction Practice Test

The diagram below illustrates the important stages in the life cycle of an organism that reproduces sexually.



23. Which processes result in the formation of cells with the monoploid number of chromosomes?  
 A) 2 and 3                      B) 3 and 4                      C) 4 and 5                      D) 1 and 2
24. Which processes result in the formation of a fertilized cell with the diploid number of chromosomes?  
 A) 3                                  B) 5                                  C) 4 and 5                      D) 4

**Answer Key: Cell Division**

- 1) D
- 2) D
- 3) C
- 4) D
- 5) C
- 6) A
- 7) A
- 8) D
- 9) D
- 10) D
- 11) C
- 12) A

- 13) B
- 14) A
- 15) A
- 16) A
- 17) D
- 18) C
- 19) C
- 20) B
- 21) B
- 22) C
- 23) D
- 24) A