

Reading Guide Packet: Ch 12: Introduction to Genetics

Biology A

Name _____ Period _____

Ch 12.1: The Work of Gregor Mendel

1. What is *genetics*?
2. What is a *trait*?
3. When Mendel cross-pollinated pea plant parents with different traits, he created what kind of offspring?
4. How are individual organism's characteristics determined?
5. Compare and contrast *genes* with *alleles*.
6. What does the *principle of dominance* state?
7. What are *gametes*? What happens to *alleles* during the formation of gametes?

Reading Guide Packet: Ch 12: Introduction to Genetics
Biology A

14. Summarize Mendel's principles of heredity.

Ch 12.3: Other Inheritance Patterns

15. What is *incomplete dominance*? Give one example.

16. What is *codominance*? Give one example.

17. What is an example of a gene with *multiple alleles*?

18. What does it mean to say that a trait is *polygenic*?

19. What might be the cause of a trait that follows a *non-Mendelian* pattern of inheritance?

Reading Guide Packet: Ch 12: Introduction to Genetics

Biology A

20. Give an example of gene expression that is influenced by environmental conditions.

Ch 12.4: Meiosis

21. What are *homologous* chromosomes?

22. Compare and contrast *diploid* and *haploid* cells.

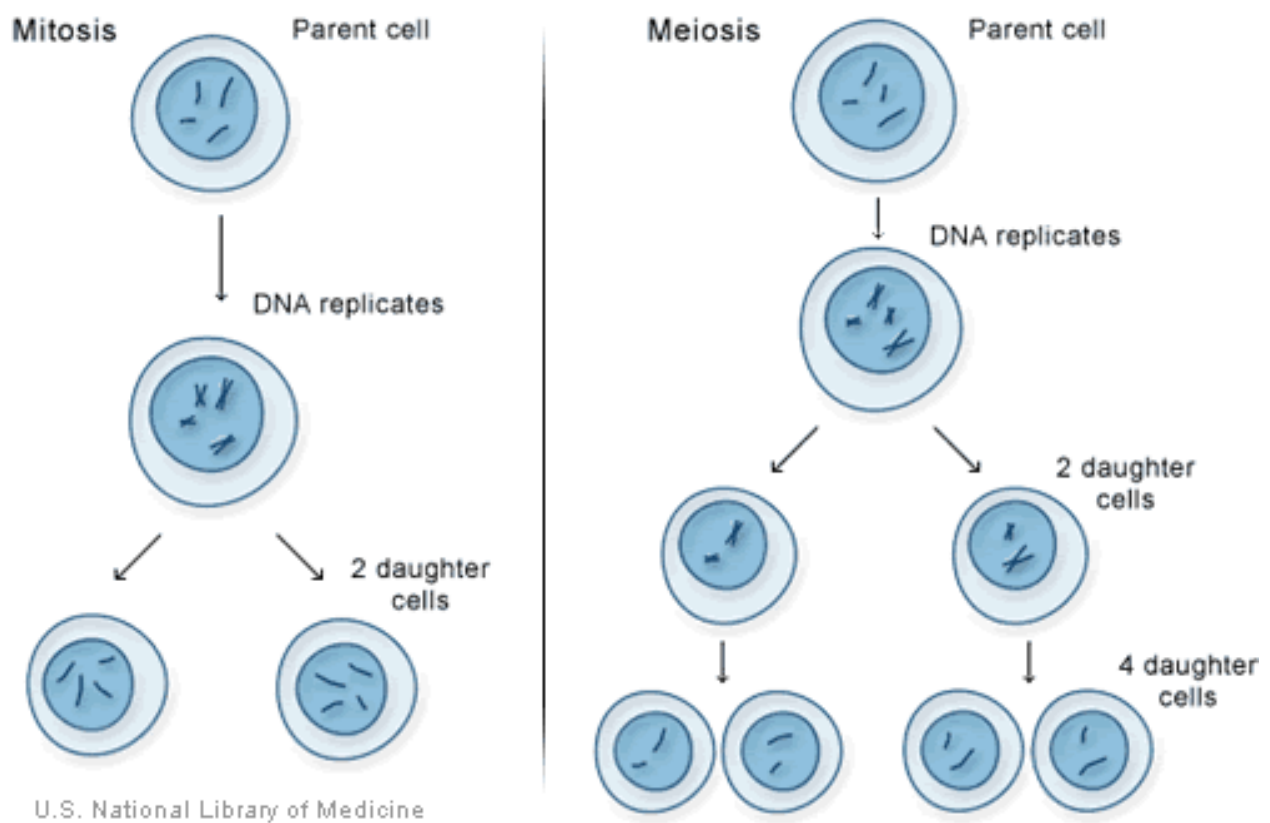
23. What process produces haploid gametes from diploid body cells?

24. What is *crossing-over*? What is the result of this process?

Reading Guide Packet: Ch 12: Introduction to Genetics

Biology A

25. Compare the final results of *mitosis* and *meiosis*.



26. Why are some different genes often inherited together from one generation to the next?