Name: _____ Unit VII
Mr. Willis Biology – Heredity
Biology: _____ Need extra help?
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VII

Video: Alternate Patterns of Inheritance

1. Gregor Mendel used empirical analysis of _____ data to reach conclusions.

2. The basis of Mendel's discoveries arises from the fact that _____ sperm nuclei from pollen and _____ egg cells are formed by meiosis.

3. When the sperm nucleus and the egg cell meet during _____, the complimentary alleles match up in new combinations.

4. Mendel's model of inheritance rejected the homunculus and _____ concepts postulated by other biologists in the 19th century.

5. He showed that the breeding of tall pea plants with short pea plants did NOT result in _____ plants.

6. Chromosomes consist of a _____ of genes.

7. Alleles are two or more forms of a gene occupying a specific _____ on homologous chromosomes.

8. Mendel's first law describes the _____ of alleles when the chromosomes separate during Meiosis I.

9. Mendel found that the crossing of heterozygous F1 plants with more than one trait produces phenotypes in the F2 offspring in a ratio that is mathematically predictable only if traits are inherited _____.

10. The segregation of any one type of allele is not _____ to any other.

11. This is called the Law of _____ _____.

12. Multiple alleles are the existence of more than two alleles for a _____ trait.

13. Each diploid individual can have only _____ of the allelic forms of a particular gene.

14. Human blood types are an example of multiple alleles and _____.

15. The recessive allele in blood type is represented by a _____.

16. Both ____ and ____ alleles are dominant over small "i" but are equally dominant to one another.

17. _____ is the blood plasma left after the healing proteins that clot around a wound have been removed.

18. Serum _____ when mixed with some blood samples and not others.

19. When the antibodies react with a foreign _____, clumping results.

20. Type O is called the _____ donor because not antigens are present.

21. Another protein antigen on the surface of red blood cells is called the _____ factor.

22. The tool to determine who might be related is called a _____ chart.

23. It is used to trace the inheritance of traits for several _____.

24. Females are represented by _____ and males are represented by _____.

25. There are over _____ different factors that can be tested on a thorough blood test.

26. Himalayan rabbits have _____ different color possibilities that are controlled by _____ genes. One controls the blue color (B) and one controls the chocolate color (C).

27. Chocolate (CC or Cc) plus Blue (BB or Bb) results in a rabbit with _____ markings.

28. Both genes showing two recessive alleles (ccbb) results in a _____ coat color.

29. With multiple alleles the chances to get a specific result are reduced to as much as 1 in _____.

30. Color in Himalayan Rabbits is also affected by _____.

31. Multiple alleles also act in a _____ where A is dominant over B which is dominant over C.

32. If blending occurs you are actually seeing _____ dominance in heterozygotes.

33. The F1 generation shows ¼ red (RR), ½ heterozygous pink (RR′) and ¼ pure white (R′R′) which shows that the alleles remain _____.

34. _____ refers to the ability of a single gene to produce changes in many phenotypic traits in one individual creating multiple effects in that individual.

35. _____ _____ is an example of this.

36. In _____ inheritance, the cumulative result of the combined effects of many genes influences a single phenotypic characteristic.

37. Human skin color is controlled by _____ separately inherited genes whose alleles do not have complete dominance over any other.

38. Exposure to the sun is an _____ factor that affects skin color.

39. In _____ one gene interferes with the expression of another.

40. Besides genes, the environment affects who we are.

41. Define the following terms
    a. Incomplete dominance –

    b. Multiple alleles –

    c. Pleiotropy –

    d. Epistasis –

    e. Co-dominance –

    f. Polygenic –

42. The final consideration in phenotypic variation is the effect of the _____ on the phenotypic expression of the alleles.