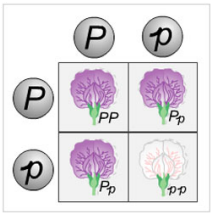
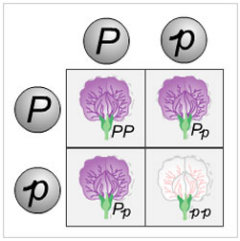
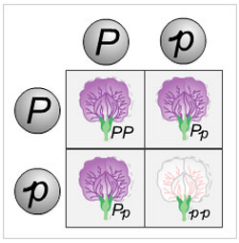
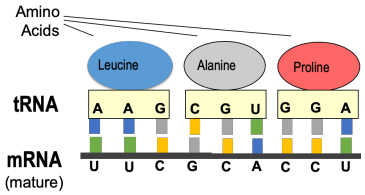
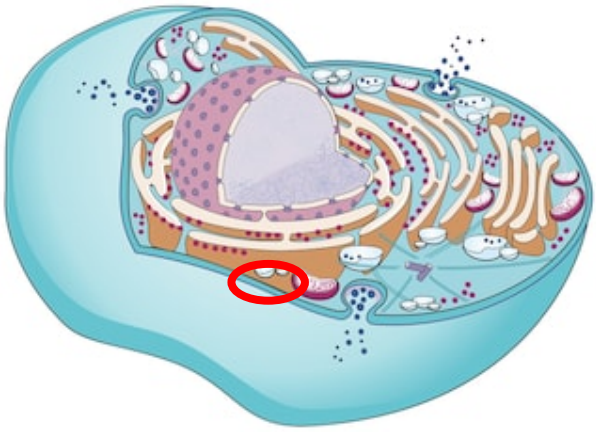
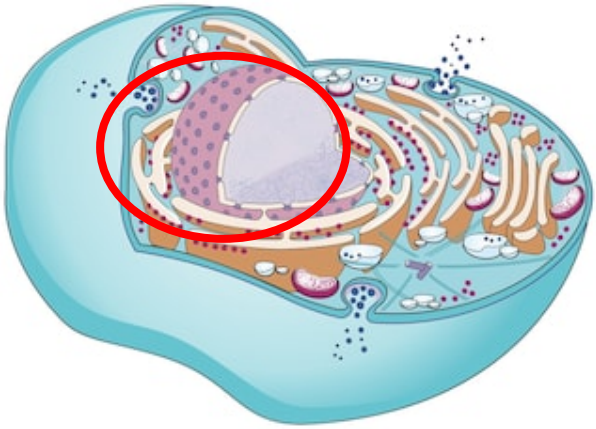
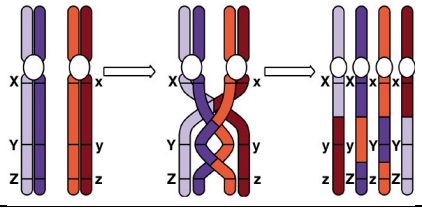
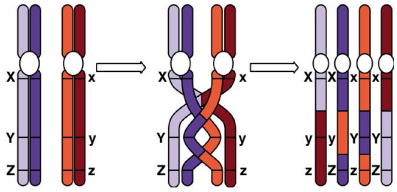
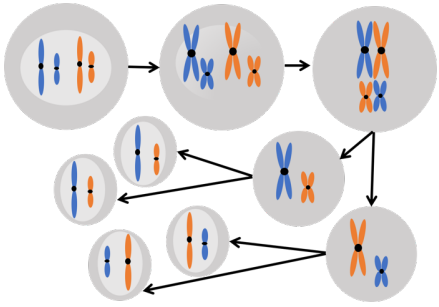
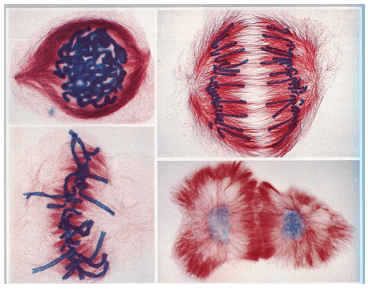
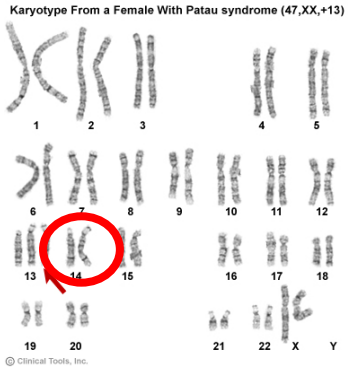
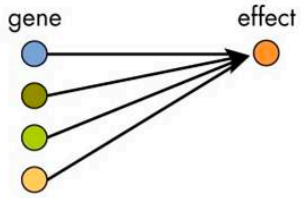
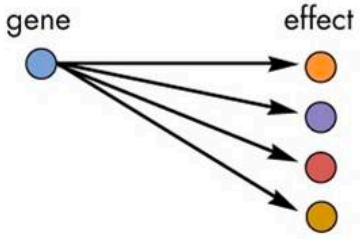
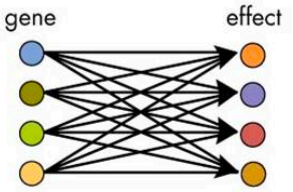
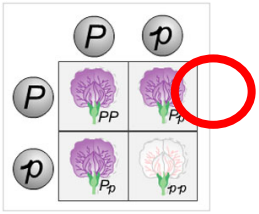
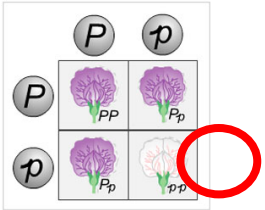
Question	Answer
1. These are the genotypes and phenotypes of mom & dad  This is what the kid looks like, what is this an example of? 	Co-Dominance
2. This is a group of alleles that tend to be inherited as a unit due to their closely spaced loci on a single chromosome	Haplotype
3. This is the exchange of genetic material between homologous chromosomes, resulting in a cross-over event	Recombination
4. These are the genotypes and phenotypes of mom & dad  This is what the kid looks like, what is this an example of? 	Incomplete Dominance

5. What is this thing called? 	Punnett Square
6. What process is this picture demonstrating? 	Translation
7. What this thing circled in red? 	Mitochondria
8. This asserts that the inheritance of one trait does not affect the inheritance of other traits?	Law of Independent Assortment
9. True or False: human gametes are diploid	False
10. What are the 4 nitrogenous bases of DNA?	Adenine, Thymine, Guanine, Cytosine

11. What are the 4 nitrogenous bases of RNA?	Adenine, Uracil, Guanine, Cytosine
12. What's the thing circle in red? 	Nucleus
13. This is the failure of chromosomes to properly segregate during meiosis, creating some gametes with an abnormal number of chromosomes	Nondisjunction
14. Name 3 of the 7 types of proteins	Possible answers: enzymes, structural, gas transporters, antibodies, hormones, mechanical, nutrient
15. How many essential amino acids are there?	8
16. Why are they called essential amino acids?	Because the body cannot make them and must get them from diet
17. What are the two main processes involved in protein synthesis?	Transcription & Translation
18. Where does transcription take place?	Nucleus

19. Where does translation take place?	Cytoplasm
20. What is the general term for regulatory genes, that control embryonic development for example?	Homeotic or Hox genes
21. True or False: the genes that control development of the limbs are the same in mice as they are in humans	True
22. True or False: the genes that control development of the eyes are different in flies than they are in humans	False
23. This is presence of 2 or more alleles at a locus	Polymorphism
24. There are 4 alleles for blood type, this is an example of what?	Polymorphism
25. This states that 2 alleles for any given gene (or trait) are inherited, one from each parent, during gamete production, only one of the two alleles will be present in each gamete	Law of segregation
26. These are heavily repeated segments of DNA that are highly individual from person to person and can be used to ID a person	Microsatellites
27. What is this process called? 	Recombination

28. During what kind of cell division does this process take place?  	Meiosis
29. What process is this? 	Meiosis
30. What process is this? Yes, it is complete. 	Mitosis
31. What is the name for this kind of mutation?  	Trisomy

32. This is an example of what kind of trait? 	Polygenic
33. This is an example of what kind of gene? 	Pleiotropic
34. This is an example of what? 	Polygenic Traits & Pleiotropic Genes
35. The circled flower has what kind of genotype? 	Heterozygous
36. The circled flower has what kind of genotype? 	Homozygous

37. It has been found that air pollution can alter DNA methylation and increase risk for some neurodegenerative diseases – this is an example of…	Epigenetics
38. It has been found that a high fat, low carb diet may loosen up chromatin and improve mental ability – this is an example of…	Epigenetics
39. Human height is affected by many genes; therefore, it is a _____ trait.	Polygenic
40. Human eye color is affected by many genes; therefore, it is a _____ trait.	Polygenic
41. A mutation in the FBN1 gene leads to Marfan Syndrome, which impact the skeletal, cardiovascular, & pulmonary systems as well as the eyes. Knowing this, what kind of gene is FBN1?	Pleiotropic
42. A mutation in a single gene on chromosome 12 can produce Phenylketonuria, which causes mental retardation, reduced hair pigmentation, reduced skin pigmentation, delayed growth, and abnormal gait and posture. Knowing this, what kind of gene is this?	Pleiotropic
43. The process of cell division resulting in two identical cells with 46 chromosomes in humans is…	Mitosis
44. These sequences of DNA that code for proteins.	Exons

45. These are non-coding pieces of DNA	Introns
46. What are prokaryotes?	Single-cell organisms with no internal compartments
47. What type of cells compose most of the body tissue?	Somatic cells
48. What are gametes?	The sex cells
49. What is the genome?	The complete set of genetic information for an organism or a species, representing all inheritable traits
50. True or False: all organisms share much the same genome	True
51. This is the name for the rare instance in which nonhomologous chromosomes exchange segments during meiosis	Translocation
52. Which proteins are responsible for our basic bone shapes, tooth size, eye color, and hair form?	Structural proteins
53. What is an example for a difference in regulatory genes that is common in people of Eastern African or Northern European descent?	Lactase persistence
54. This is an example of heteroplasmic DNA	mitochondrial DNA
55. This process represses or fully stops gene expressions, which can cause birth defects	Methylation