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**Genetics Test Review**

1. Describe Mendel’s law of independent assortment.

2. Define the following terms

|  |  |
| --- | --- |
| Hybird/Heterozygous |  |
| Purebred/Homozygous |  |
| Dominant |  |
| Recessive |  |
| Phenotype |  |
| Genotype |  |
| Gene |  |
| Allele |  |

3. What are the possible genotypes of the offspring if a male with BO blood marries a female with OO blood?

4. In turkeys a dominant gene R produces the familiar bronze color; its recessive allele r results in red. Two heterozygous turkeys produce offspring. What are their possible phenotypes and genotypes?

5. White flowers and red flowers make pink flowers. This is an example of what type of inheritance?

6. How many **pairs** of chromosomes do humans have?

7. What is mitosis and why do our cells go through mitosis?

7. What are the 4 phases of mitosis? What happens in each phase?

8. What are centromeres, spindle fibers and centrioles?

9. What are the differences between meiosis and mitosis?

10. What is a homologous chromosome?

11. When does crossing over occur?

12. Define the following terms: haploid, diploid and gametes

13. How many cells are produced during meiosis? During mitosis? How many chromosomes end up in each cell if the cell is human?

14. What are the differences between asexual and sexual reproduction?

15. List the advantages and disadvantages of both sexual and asexual reproduction.

16. Define selective breeding (artificial selection).