Name _____   Date _____

PROBABILITY AND HEREDITY –Activity 2

Practice with Crosses. Show all work! SHOW ALL WORK!

5. A **TT** (tall) plant is crossed with a **tt** (short plant).
   What percentage of the offspring will be tall? _____

6. A **Tt** plant is crossed with a **Tt** plant. What percentage of the offspring will be short? _____

7. A heterozygous round seeded plant (**Rr**) is crossed with a homozygous round seeded plant (**RR**).
   What percentage of the offspring will be homozygous (**RR**)? _____

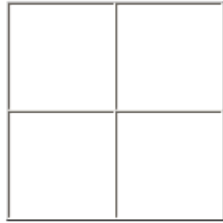8. A *homozygous* round seeded plant is crossed with a *homozygous* wrinkled seeded plant.

   What are the **genotypes** of the parents?
   _____ x _____

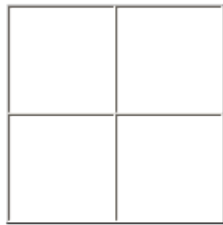   What percentage of the offspring will
   also be homozygous? _____

9. **In pea plants purple flowers are dominant to white flowers**.
   If two white flowered plants are crossed,
   what percentage of their offspring will be white flowered? _____
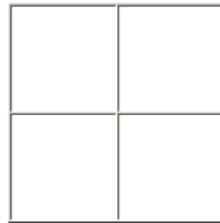

10. A white flowered plant is crossed with a plant that is heterozygous for the trait.
    What percentage of the offspring will have purple flowers?_____

11. Two plants, both heterozygous for the gene that controls flower color are crossed.

What percentage of their offspring will have
   purple flowers? _____

What percentage will have
   white flowers? _____

12. **In guinea pigs, the allele for short hair is dominant.**

What genotype would a *heterozygous short haired* guinea pig

   have? _____

What genotype would a *purebred short haired* guinea pig

   have? _____

What genotype would a *long haired* guinea pig have? _____

13. Show the cross for a pure breeding short haired guinea pig and a long haired guinea pig. What percentage of the offspring will have short hair? _____

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14. Show the cross for two heterozygous guinea pigs.

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What percentage of the offspring will have short hair? _____

What percentage of the offspring will have long hair? _____

15. Show the cross for two homozygous recessive guinea pigs.

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What percentage of the offspring will have short hair? _____

What percentage of the offspring will have long hair? _____