Name _____ Date_____Period _____

Punnett Square Practice 3

1) Draw the punnett square that shows the percentage of albino kids if parents with this genotype mate:
NN x nn (albino)

2) Albinism is a recessive condition where the organism doesn't have normal pigmentation. (Think of a white lab rat that has pink eyes.) In order to have the condition, a person must have the genotype: (nn). (N = normal gene)

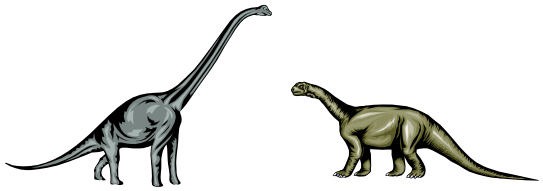
Draw the punnett square that shows the percentage of albino kids if parents with these genotypes mate:
nn (albino) x Nn (carrier)

3) Two normal healthy parents marry and have 5 kids. 2 kids are normal and 3 suffer from mucous-clogged lungs. Is this disease dominant or recessive? Explain how you know.

4) Brown eyes (B) are dominant over blue eyes (bb).
A blue-eyed man marries a brown-eyed woman. (The woman's father also has blue eyes.) Show with a punnett square the percentage of kids that would have blue eyes. Woman's genotype on the left, male's on the top!

5) Polydactyly is a dominant disease that results in 6+ fingers on a hand.
If a heterozygous parent (Dd) with 6 fingers marries a normal parent (dd), what percentage of the kids might have 6 fingers on a hand? Use a punnett square to show the percentage of affected kids.

6) Pretend that "L" is a dominant allele that makes a Brontosaurus have a Long neck. If a homozygous dominant dinosaur mates with a homozygous recessive dinosaur, what kind of necks will the kids have? Use a punnett square to show the possible outcomes.



7) If the baby dinosaur in the previous problem were to mature and mate with another dinosaur with the same genotype, what would the possible genotypes of the next generation be? Use a punnett square.

8) You are working at Jurassic Park and you want to know if a brontosaurus with a long neck is homozygous dominant or heterozygous. Thus, you breed your unknown dinosaur to one with a short neck (ll). Out of the 12 eggs that were hatched, about half of the babies had short necks; the other half had long necks. What is the genotype of your unknown brontosaurus? Use a Punnett Square and work backward to figure out the genotype of the unknown parent.

9) A friend of yours is confused. He noticed that a pure tall plant bred crossed with a pure short plant always produces tall offspring. Why is this? Which trait is dominant?

10) Your friend from the previous problem also noticed that when the heterozygous offspring were bred to one another, it resulted in 25% of the baby plants being short. 75% of the baby plants were tall. Why is this? Use a punnett square to show me why.