

Name: _____ Date: _____ Period: _____

KEY

Honors Biology: Inherited Disorders (9.8-9.9 and 9.22)

How can patterns of inheritance be explained using a knowledge of chromosomes?

1. On your own...Read Sections 9.8, 9.9, and 9.22

2. Define the following terms:

- Carriers: have a recessive allele but are normal phenotype
- Inbreeding: mating of close relatives
- Pedigree: family tree

3. In genetics...dominant and recessive refer to what? ...what do they NOT refer to?

having that allele results in that phenotype must be homozygous to show this phenotype "more common" or "normal"

4. Describe how pedigrees can be analyzed using a knowledge of Mendel's Laws and alleles:

Can trace recessive alleles through generations, as recessive phenotypes must be homozygous... parents must be heterozygous

5. Most human genetic disorders are recessive. Why might this be so?

- "Carriers" (those who are heterozygous) are normal phenotype
- those who have disorder are homo. recessive

6. Why is inbreeding not a good idea?

- chances of producing homo. recessive increases if that allele is present in that family's "pedigree"

7. Lethal, dominant alleles are much less common than lethal, recessive one. Why?

- these kill you ... before you can reproduce
- heterozygous people are affected

8. Why are lethal dominant alleles not eliminated from the "gene pool" of a population?

- ~~misconception~~

if they kill late in life

(reproduction can pass on before individual dies)