NAME:_____ DATE:_____ PER:_____

BIO-GEN-7

INHERITANCE OF TRAITS

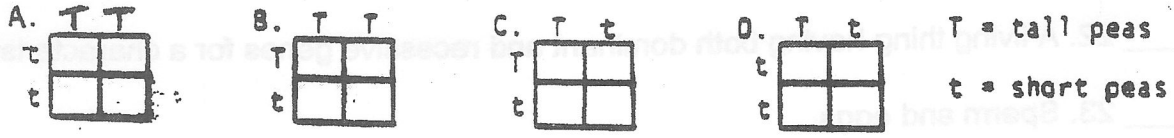
A. Understanding Ideas:

(Write "TRUE" before each statement that is true or "FALSE" before each that is false.)

1. _____ Chromosomes are found in the nucleus of a cell.
2. _____ A human cell with 46 chromosomes is a sex cell.
3. _____ Genes are parts of chromosomes.
4. _____ The letter combination of "Dd" shows a hybrid.
5. _____ A mother who is "Dd" can make only D eggs.
6. _____ A father who is "Dd" can make "D" or "d" sperm.
7. _____ Mendel reported results of genetic crosses.
8. _____ Genes are passed from parents to offspring in the joining of the body cells.
9. _____ A living thing that shows a dominant trait may be pure dominant or pure recessive for that trait.
10. _____ A sex cell has twice as many chromosomes as a body cell.
11. _____ Genes determine the traits living things have.
12. _____ The effect of a recessive gene is hidden by the presence of a dominant gene.

B. Interpreting Ideas:

(Examine the following punnet squares showing genetic crosses of peas. Then answer the questions with A, B, C, or D. Work out the crosses if it will help you.)



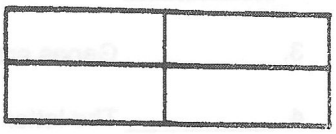
13. _____ Which cross is between pure dominant and pure recessive parents?
14. _____ Which cross is between two hybrid parents?
15. _____ Which crosses will produce all tall peas?
16. _____ Which cross will produce two short peas?
17. _____ Which crosses have only one hybrid parent?
18. _____ Which cross is between a pure recessive parent and a hybrid parent?

C. Using Ideas:

(Answer the following questions in the spaces provided by working out the genetics problems in the punnet squares provided.)

19. What are the possible genotypes of the offspring if the father is "HH" for a trait and the mother is "hh"? _____

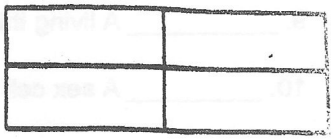
_____



20. Let gene "B" code for brown eyes and gene "b" code for blue eyes. If the father is "Bb" and the mother is "bb", what is the phenotype ratio of the F1 generation?

_____

_____



D. Vocabulary Check:

A. trait	B. gene	C. dominant	D. genetics
E. sex cells	F. hybrid	G. chromosomes	H. pure

_____ 21. The study of how characteristics are passed from parents to offspring.

_____ 22. A living thing having both dominant and recessive genes for a characteristic.

_____ 23. Sperm and eggs.

_____ 24. A characteristic of a living thing.

_____ 25. Threadlike parts found in the nucleus.

_____ 26. The unit that determines a characteristic of a living thing.

_____ 27. The type of gene that prevents other genes from showing.

_____ 28. Having two of the same type of genes for a characteristic.