

Name _____ Date _____ Period _____

PUNNETT SQUARE POSTER PROJECT

The following is a list of genetic traits found in human beings:

1. Long eyelashes (L) is dominant to short eyelashes (l).
2. Separate eyebrows (B) is dominant to connected eyebrows (b).
3. Dimples (D) is dominant to no dimples (d).
4. Thick lips (TT), medium lips (Tt), and thin lips (tt) exhibit incomplete dominance.
5. Large ears (E) is dominant to small ears (e).
6. Curly hair (HH), straight hair (hh), and wavy hair (Hh) exhibit incomplete dominance.

A man has the following characteristics:

- a. heterozygous long eyelashes
- b. heterozygous eyebrows
- c. homozygous dimples
- d. thin lips
- e. heterozygous large ears
- f. wavy hair

His wife has the following characteristics:

- a. heterozygous long eyelashes
- b. heterozygous eyebrows
- c. no dimples
- d. thick lips
- e. heterozygous large ears
- f. wavy hair

1. What is the man's genotype? _____
2. What is the woman's genotype? _____
3. Determine all possible genotypes for the man's sperm cells.
HINT: There are 16 different sperm cells.
4. Determine all possible genotypes for the woman's egg cells.
HINT: There are 16 different egg cells.
5. Using a Punnett Square, determine the % of phenotypes for their children.
HINT: There are 24 different possible phenotypes.
6. Sketch and color a drawing of all 24 possible offspring using the attached sheet of paper.

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PARENTAL GENOTYPES:

• MAN'S GENOTYPE = _____

• WOMAN'S GENOTYPE = _____

GAMETE GENOTYPES:

16 SPERM CELLS

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

11. _____

12. _____

13. _____

14. _____

15. _____

16. _____

16 EGG CELLS

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

11. _____

12. _____

13. _____

14. _____

15. _____

16. _____

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OFFSPRING PHENOTYPES:

1. _____ / 256
2. _____ / 256
3. _____ / 256
4. _____ / 256
5. _____ / 256
6. _____ / 256
7. _____ / 256
8. _____ / 256
9. _____ / 256
10. _____ / 256
11. _____ / 256
12. _____ / 256
13. _____ / 256
14. _____ / 256
15. _____ / 256
16. _____ / 256
17. _____ / 256
18. _____ / 256
19. _____ / 256
20. _____ / 256
21. _____ / 256
22. _____ / 256
23. _____ / 256
24. _____ / 256