

Name _____ Date _____ Period _____

PUNNETT SQUARE POSTER PROJECT

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

1. Thick lips (T) are dominant to thin lips (t).
2. Dimples (D) are dominant to no dimples (d).
3. Bushy eyebrows (B) are dominant to thin eyebrows (b).
4. Large nose (NN), medium nose (Nn), and small nose (nn) exhibit incomplete dominance.
5. Long eyelashes (L) are dominant to short eyelashes (l).
6. Curly hair (HH), straight hair (hh), and wavy hair (Hh) exhibit incomplete dominance.

A man has the following characteristics:

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

His wife has the following characteristics:

- a. heterozygous thick lips
- b. heterozygous dimples
- c. homozygous bushy eyebrows
- d. small nose
- e. heterozygous long eyelashes
- 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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PUNNETT SQUARE POSTER PROJECT

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