

Name _____ Date _____ Period _____

PUNNETT SQUARE POSTER PROJECT

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

1. Widow's peak (P) is dominant to no widow's peak (p).
2. Bushy eyebrows (B) are dominant to thin eyebrows (b).
3. Freckles (F) are dominant to no freckles (f).
4. Rounded nose (R) is dominant to pointed nose (r).
5. Free earlobes (E) are dominant to attached earlobes (e).
6. Curly hair (HH), straight hair (hh), and wavy hair (Hh) exhibit incomplete dominance.

A man has the following characteristics:

- a. heterozygous widow's peak
- b. thin eyebrows
- c. homozygous freckles
- d. heterozygous rounded nose
- e. heterozygous free earlobes
- f. wavy hair

His wife has the following characteristics:

- a. heterozygous widow's peak
- b. homozygous bushy eyebrows
- c. no freckles
- d. heterozygous rounded nose
- e. heterozygous free earlobes
- 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