

Name _____ Date _____ Period _____

PUNNETT SQUARE POSTER PROJECT

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

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

A man has the following characteristics:

- a. heterozygous bushy eyebrows
- b. heterozygous long eyelashes
- c. homozygous dimples
- d. large nose
- e. heterozygous cleft chin
- f. curly hair

His wife has the following characteristics:

- a. heterozygous bushy eyebrows
- b. heterozygous long eyelashes
- c. no dimples
- d. small nose
- e. heterozygous cleft chin
- f. curly 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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Component	Points Earned	Point Value
man's genotype		1
woman's genotype		1
16 sperm cells		4
16 egg cells		4
24 offspring phenotypes		16
24 offspring pictures (drawn, colored, fraction)		12
poster-sized Punnett Square		12
<i>TOTAL POINTS EARNED</i>		50

COMMENTS

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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

PHENOTYPE = _____ / _____

PHENOTYPE = _____ / _____

PHENOTYPE = _____ / _____

PHENOTYPE = _____ / _____

PHENOTYPE = _____ / _____

PHENOTYPE = _____ / _____

PHENOTYPE = _____ / _____

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