Name _____ Date _____ Period _____

PUNNETT SQUARE POSTER PROJECT

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

1. Freckles (F) are dominant to no freckles (f).
2. Separate eyebrows (B) is dominant to connected eyebrows (b).
3. Free earlobes (E) are dominant to attached earlobes (e).
4. Curly hair (HH), straight hair (hh), and wavy hair (Hh) exhibit incomplete dominance.
5. Widow's peak (P) is dominant to no widow's peak (p).
6. Thick lips (TT), medium lips (Tt), and thin lips (tt) exhibit incomplete dominance.

A man has the following characteristics:

a. heterozygous freckles
b. heterozygous eyebrows
c. attached earlobes
d. curly hair
e. heterozygous widow's peak
f. medium lips

His wife has the following characteristics:

a. heterozygous freckles
b. heterozygous eyebrows
c. homozygous free earlobes
d. straight hair
e. heterozygous widow's peak
f. medium lips

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
TOTAL POINTS EARNED		50

COMMENTS

Name _____ Date _____ Period _____

PUNNETT SQUARE POSTER PROJECT

PARENTAL GENOTYPES:

- MAN'S GENOTYPE = _____
- WOMAN'S GENOTYPE = _____

GAMETE GENOTYPES:

16 SPERM CELLS	***16 EGG CELLS***
1. _____	1. _____
2. _____	2. _____
3. _____	3. _____
4. _____	4. _____
5. _____	5. _____
6. _____	6. _____
7. _____	7. _____
8. _____	8. _____
9. _____	9. _____
10. _____	10. _____
11. _____	11. _____
12. _____	12. _____
13. _____	13. _____
14. _____	14. _____
15. _____	15. _____
16. _____	16. _____

Name _____ Date _____ Period _____

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 = ________ / ________	PHENOTYPE = ________ / ________
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PHENOTYPE = ________ / ________	PHENOTYPE = ________ / ________	PHENOTYPE = ________ / ________	PHENOTYPE = ________ / ________