

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_

Genetics Practice Sheet**Section A** (6 Points)

Identify whether the allele is dominant (D) or recessive (R):

- |            |            |
|------------|------------|
| 1. B _____ | 4. A _____ |
| 2. b _____ | 5. f _____ |
| 3. X _____ | 6. m _____ |

**Section B** (8 Points)

Identify whether the gene is dominant (D) or recessive (R):

- |             |             |             |
|-------------|-------------|-------------|
| 1. BB _____ | 4. Gg _____ | 7. Aa _____ |
| 2. aa _____ | 5. FF _____ | 8. DD _____ |
| 3. Xx _____ | 6. pp _____ |             |

**Section C** (8 Points)

Identify whether the gene is homozygous (Ho) or heterozygous (He):

- |             |             |             |
|-------------|-------------|-------------|
| 1. HH _____ | 4. yy _____ | 7. JJ _____ |
| 2. GG _____ | 5. Ff _____ | 8. Pp _____ |
| 3. Yy _____ | 6. mm _____ |             |

**Section D** (10 Points)

Identify whether the gene is homozygous dominant (HoD), heterozygous dominant (HeD), or homozygous recessive (HoR):

- |             |             |              |
|-------------|-------------|--------------|
| 1. KK _____ | 5. JJ _____ | 9. DD _____  |
| 2. ll _____ | 6. Hh _____ | 10. Ww _____ |
| 3. dd _____ | 7. cc _____ |              |
| 4. Tt _____ | 8. RR _____ |              |

**Section E** (12 Points)

Identify the phenotype

- Brown eyes are dominant to green eyes. Fill in the blanks with "brown" or "green" eyes  
BB \_\_\_\_\_ Bb \_\_\_\_\_ bb \_\_\_\_\_
- A full head of hair is dominant to baldness. Fill in the blanks with "hair" or "bald"  
Hh \_\_\_\_\_ hh \_\_\_\_\_ HH \_\_\_\_\_
- Curly hair is dominant to straight hair. Fill in the blanks with "curly" or "straight"  
cc \_\_\_\_\_ CC \_\_\_\_\_ Cc \_\_\_\_\_
- Tongue rolling is a dominant trait, so rollers are dominant and nonrollers are recessive  
Fill in the blanks with "roller" or "nonroller"  
TT \_\_\_\_\_ tt \_\_\_\_\_ Tt \_\_\_\_\_

**Section F (8 Points)**

- This Punnett Square shows a father and mother that are both heterozygous dominant for tongue rolling. Tongue rolling is a dominant trait. The possible genotypes for their children are shown.
- Color the heterozygous boxes **yellow**, homozygous recessive boxes **red** and the homozygous dominant boxes **purple**.

|   |    |    |
|---|----|----|
|   | T  | t  |
| T | TT | Tt |
| t | Tt | tt |

- How many boxes have heterozygous dominant genes?  
\_\_\_\_\_ out of \_\_\_\_\_ OR \_\_\_\_\_%
- How many boxes have homozygous dominant genes?  
\_\_\_\_\_ out of \_\_\_\_\_ OR \_\_\_\_\_%
- How many boxes have homozygous recessive genes?  
\_\_\_\_\_ out of \_\_\_\_\_ OR \_\_\_\_\_%
- What is the probability that they will have a child that's heterozygous dominant? \_\_\_\_\_%
- What's the probability that their little boy will be able to roll his tongue? \_\_\_\_\_%

**Section G (8 Points)**

1. Felicia and Christian want to know if their child will have curly or straight hair. The mom has curly hair and the dad has straight hair. Fill in the Punnett Square to see what type of hair their kid will have.

QuickTime™ and a TIFF (Uncompressed) decompressor are needed to see this picture.

- Is Felicia's genotype on the left or top? \_\_\_\_\_
- Is Felicia's genotype homozygous or heterozygous?  
\_\_\_\_\_
- Is Felicia dominant or recessive for curly hair? \_\_\_\_\_

- Use a colored pencil to lightly shade in the boxes that are heterozygous.
- What is the probability that Felicia and Christian's child will have curly hair? \_\_\_\_\_%
- What is the probability that their child will have straight hair? \_\_\_\_\_%

2. The same couple wants to know what color hair their kid will have. Brown hair is a dominant trait. Felicia has brown hair but her father had red hair. Christian has red hair and both his parents had red hair too. Fill in the Punnett square to see what color hair their kid will have.

QuickTime™ and a TIFF (Uncompressed) decompressor are needed to see this picture.

- What percentage of their children will have brown hair?  
\_\_\_\_\_%
- What percentage of their children will have red hair?  
\_\_\_\_\_%
- Which hair color is dominant, red OR brown? \_\_\_\_\_