

Name: Key Date: _____ Period: _____

Punnett Square Practice Worksheet

Directions: For the following Pairs of traits, conduct a Mendelian Monohybrid cross to determine the F1 Generations Genotype and Phenotype.

| | | | | | |
|----|----|----|----|----|----|
| #1 | B | b | #2 | C | c |
| B | BB | Bb | c | Cc | cc |
| b | Bb | bb | c | Cc | cc |

Results:

#1 Dom. Trait: B – Brown Hair

#1 Rec. Trait: b – blonde hair

#1 Phenotypic Ratio: 3 Brown : 1 blonde

#1 Genotypic Ratio: 1 BB : 2 Bb : 1 bb

#2 Dom. Trait: C – Circular Flower

#2 Rec. Trait: c – square flower

#2 Phenotypic Ratio: 1:1

#2 Genotypic Ratio: 1:1

| | | | | | |
|----|----|----|----|----|----|
| #3 | R | r | #4 | W | w |
| r | Rr | rr | w | Ww | ww |
| r | Rr | rr | w | Ww | ww |

Results:

#3 Dom. Trait: R – Round Seed

#3 Rec. Trait: r – wrinkled seed

#3 Phenotypic Ratio: 4:0 ^{round}

#3 Genotypic Ratio: 4:0 _{rr}

#4 Dom. Trait: W – White Fur

#4 Rec. Trait: w – black fur

#4 Phenotypic Ratio: 1:1

#4 Genotypic Ratio: 1:1

| | | | | | |
|----|----|----|----|----|----|
| #5 | T | t | #6 | D | d |
| t | Tt | tt | D | DD | Dd |
| t | Tt | tt | D | DD | Dd |

Results:

#5 Dom. Trait: T – Tall Height

#5 Rec. Trait: t – short height

#5 Phenotypic Ratio: 0 tall : 4 short

#5 Genotypic Ratio: 4 tt : 0

#6 Dom. Trait: D – High Metabolism

#6 Rec. Trait: d – normal metabolism

#6 Phenotypic Ratio: 4 high : 0 low

#6 Genotypic Ratio: 1 DD : 1 Dd