Science-7 Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_

Mr. Roach / Ms. Wulfow

Punnett Squares

Questions 1 through 4 – Let’s say that short hair (*H*) is dominant over long hair (*h*) in dachshunds. A pure short haired dachshund (*HH*) is cross-bred with a pure long haired (*hh*). Complete the Punnett Square to determine all of the possible allele combinations for this cross, and answer the questions.

1) What is the probability that the offspring will be pure short haired?

2) What is the probability that the offspring will be hybrid short haired?

3) What is the probability that the offspring will be short haired?

4) What is the probability that the offspring will be pure long haired

Questions 5 through 8 – Let’s say that in humans, brown hair (*B*) is dominant over blonde hair (*b*). A hybrid brown haired parent is cross-bred with a pure blond haired parent. Complete the Punnett Square to determine all of the possible allele combinations for this cross, and answer the questions.

5) What is the probability that the offspring will be pure brown haired?

6) What is the probability that the offspring will be hybrid brown haired?

7) What is the probability that the offspring will be brown haired?

8) What is the probability that the offspring will be blonde haired

Questions 9 through 14 – Let’s say that in foxes, pointed ears (*E*) is dominant over floppy ears (*e*). If two particular parents cross-breed, the Punnett Square that represents the possible allele combinations is shown below. Determine the alleles for each parent, and answer the following questions.

9) What are the alleles for fox parent P1?

10) Is fox parent P1 pointed, or floppy-eared?

11) Is fox parent P1 hybrid or pure?

12) What are the alleles for fox parent P2?

13) Is fox parent P2 pointed, or floppy-eared?

14) Is fox parent P2 hybrid or pure?

P1

*Ee*

*EE*

P2

*ee*

*Ee*