

NAME _____

Per _____

INCOMPLETE AND CODOMINANT PRACTICE

1. A tabby cat is crossed with a tan cat. Use punnett square A to answer the questions below. (see side 2 for tabby cat info)

a. What is the pattern of inheritance in this example?

b. What are the genotypes and phenotypes of the parents?

c. List the possible genotypes and phenotypes of the offspring.

d. What ratio of the offspring will have tabby fur? Tan fur? Black fur?

e. What are the chances, in percent, that the parents will have a kitten with black fur?

f. Suppose two cats with tan fur have kittens. What are the possible genotypes and phenotypes of their offspring?

2. There are three possible genotypes and phenotypes for wing color in a species of moth: RR = red wings; Rr = orange wings; and rr = yellow wings. Use punnett square B to answer the following questions:

a. What is the pattern of inheritance in this example?

b. What are the genotypes and phenotypes of the parents?

c. What percent of the offspring will have red wings? Orange wings? Yellow wings?

d. Moths lay lots of eggs! Suppose the parents produce 1,200 offspring. Predict how many of those offspring will have orange wings.

e. Suppose out of the 1,200 offspring, 950 have orange wings. Is this possible? Why or why not?

	B	T
T	BT	TT
T	BT	TT

Punnett square A

	R	r
R	RR	Rr
R	RR	Rr

Punnett square B

In *codominance*, an organism that has both alleles of a gene displays both phenotypes at the same time. For example, a cross between a black cat and a tan cat results in a tabby cat.

