

More Single Gene Crosses Using a Punnett Square

1. Tongue rolling is dominant to non-tongue rolling. Cross 2 non-tongue rollers.

___ = tongue roller ___ = non-tongue roller ___ X ___

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___ = 100% non-tongue rollers = ___%

2. Dimples are dominant over no dimples. Cross a person heterozygous for dimples with a person having no dimples.

___ = dimples ___ = no dimples ___ X ___

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—		

___% dimples, ___% no dimples

½, ½

3. In cats, no tail is incompletely dominant to long tail. The heterozygote is a shorttail. Cross two short-tailed cats.

L = ____ tail, N = ____ tail, LN = short tail ____ X ____

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—		

____ = LL, ____ = LN, ____ = NN

____:____:____ is the ration of Long tail: short tail: no tail

4. In Andalusian chickens black feathers are incompletely dominant to white feathers. The heterozygous chicken is a blue grey. Cross a blue chicken with a white chicken.

B = _____, ____ = White, BW = blue. ____ X ____

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—		

____% white, ____% blue, ____% black

50% __, 50% __ t

5. In shorthorn cattle, red is incompletely dominant to white coat. The heterozygous condition results in a blending of white and red hairs called roan. Cross a red bull and a roan cow.

___=red, w=white, ___=roan. ___X___

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___% red, ___% white, ___% roan

6. In pea plants, green pod color dominates yellow pod color. Two peas have been crossed, and the offspring have the phenotypic ratio of 3 green:1 yellow. Following the procedure described in the examples, show what occurred in the cross. _____ X _____

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—	green	green
—	green	yellow