

## Quiz 2

Contents to evaluate: Punnett squares

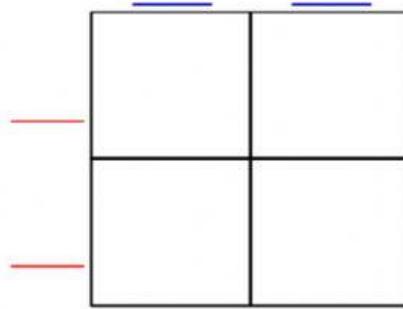
**General instructions:** Read the problems below. Answer the questions for each Punnett square correctly.

1. In dogs, the gene for fur color has two alleles. The dominant allele (F) codes for grey fur and the recessive allele (f) codes for black fur.

a. The female dog is heterozygous. The male dog is homozygous recessive.

What is the percentage of black puppies? \_\_\_\_\_

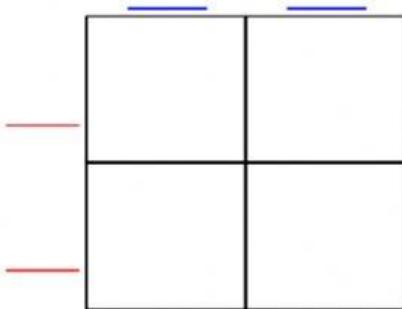
Possible Genotypes: FF: \_\_\_\_\_ Ff: \_\_\_\_\_ ff: \_\_\_\_\_



Each square represents a 25%

b. The female dog has black fur. The male dog has black fur. Figure out the phenotypes and genotypes of their possible puppies by using a Punnett Square.

Possible Genotypes: FF: \_\_\_\_\_ Ff: \_\_\_\_\_ ff: \_\_\_\_\_



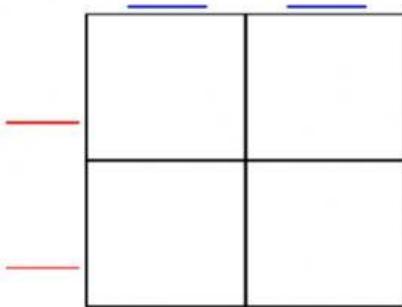
Each square represents a 25%

Phenotypes:

Black fur: \_\_\_\_\_ Grey fur: \_\_\_\_\_

c. The female dog is heterozygous. The male dog is heterozygous. Figure out the phenotypes and genotypes of their possible puppies by using a Punnett Square.

Possible Genotypes: FF: \_\_\_\_\_ Ff: \_\_\_\_\_ ff: \_\_\_\_\_



Each square represents a 25%

Phenotypes:

Black fur: \_\_\_\_\_ Grey fur: \_\_\_\_\_

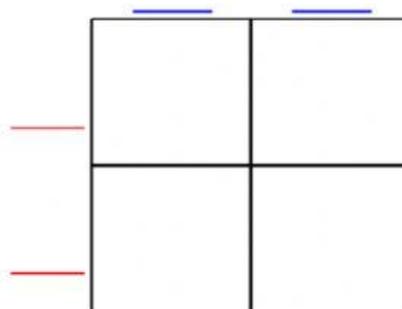


Having a widow's peak like Wentworth Miller is dominant.



Not having a widow's peak, like Rihanna, is recessive.

2. If Wentworth Miller is Aa, and he and Rihanna had children, how many children could have widow's peak? \_\_\_\_\_

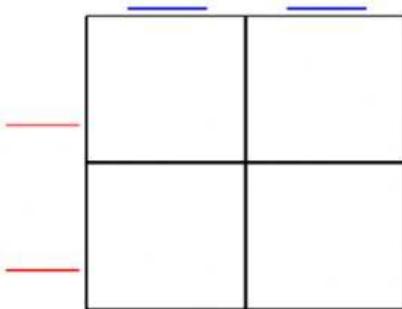


Each square represents a 25%

3. Look at the phenotypes of Beyonce and Jay Z. If these two had children, could they have children with a widow's peak? Why or why not?



4. Two heterozygous red flowers (white flowers are recessive) are crossed.



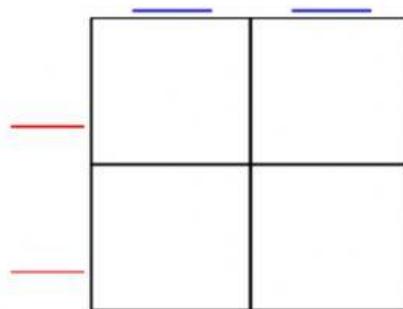
Percentage of white flowers: \_\_\_\_\_

Each square represents a 25%

5. In rabbits, black fur (B) is dominant over white fur. Show the cross of a heterozygous male with a homozygous white female. Complete a Punnett Square to support your answer.

a. What percentage of their offspring will have black fur? \_\_\_\_\_%

b. What percentage of their offspring will have white fur? \_\_\_\_\_%



Each square represents a 25%