Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Student ID: \_\_\_\_\_\_\_\_\_\_

Period: \_\_\_\_\_\_\_\_\_\_

Teacher: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_

**Do Now**

Quinn was finishing his homework which is shown in the picture below. All of Quinn’s writing is underlined. With your partner discuss Quinn’s mistakes, then write your answer on the provided lines.

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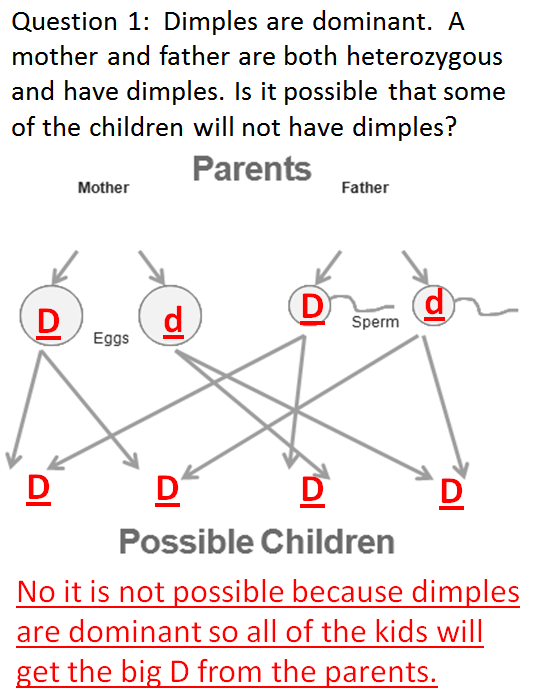
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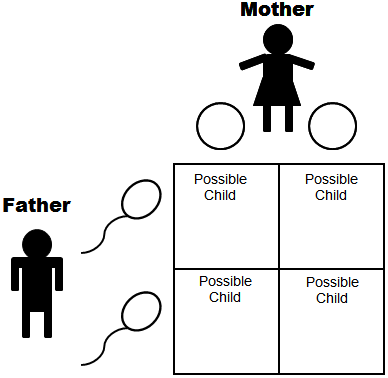
Write an explanation to Quinn that will help him see his mistakes. In your answer you should explain to him the reasoning for how to solve the problem the right way.

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**Lesson 5: In Class Punnett Square Practice 1**

Earlobes have two forms, attached and unattached. Unattached earlobes are dominant (A) and attached earlobes are recessive (a).

The father has a genotype of AA. The mother has a genotype of aa.

Use this information to answer problems 1 – 4.

1. What is the father’s phenotype?

Answer: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What is the mother’s phenotype?

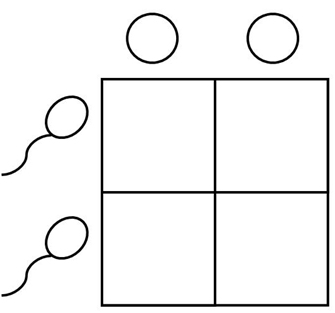
Answer: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Complete the Punnett Square on the right. What are the chances that they will have a child that has attached earlobes (aa)?

Answer: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Based on your Punnett Square. What are the chances that they will have a child that has unattached earlobes (AA or Aa)?

Answer: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



1. Having a widow’s peak is a dominant trait (H). Having a straight hairline is a recessive trait (h).

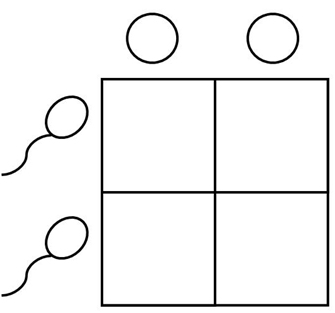
Both parents are heterozygous.

Complete the Punnettt Square on the right.

What are the possible genotypes of their children?

Answer: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Gray feathers (F) are the dominant phenotype in parrots, while green feathers (f) are recessive. A male and a female parrot are heterozygous and have gray feathers.

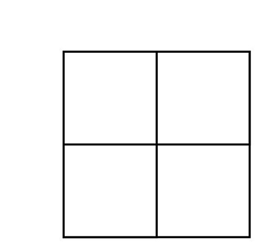


Complete the Punnett Square on the right.

What is the likelihood that their offspring will have green feathers?

Answer: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Dimples (D) is dominant in humans, and not having dimples (d) is recessive. Two parents are heterozygous and have dimples.

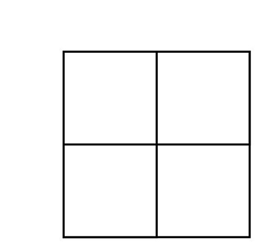
Complete the Punnett Square on the right.

They have three children, and none of the children have dimples. Explain how this can happen based on the Punnett Square.

Answer: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. Having webbed digits (fingers) is a dominant trait and it helps frogs survive.

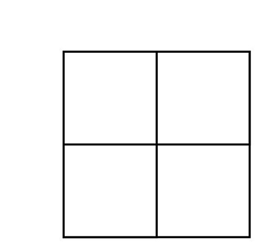
The female is heterozygote for webbed digits.

The male is homozygote for webbed digits.

Complete the Punnett Square on the right.

What are the chances that their offspring do not have webbed digits?

Answer: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Long wings (F) are dominant in dragonflies and short wings (f) are recessive. One dragonfly is heterozygous with long wings. Its mate is homozygous and has short wings.

Complete the Punnett Square on the right.

What is the probability that their offspring will have short wings?

Answer: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



1. Widows peaks are dominant (H) over straight hairlines (h) in humans. Tamara and Daniel are married. Daniel is heterozygous and has a widow’s peak. Tamara is homozygous recessive.

Draw and complete a Punnett Square in the blank space to the right.

What is the probability that they have a child who has a widow’s peak?

Answer: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Brown hamsters are becoming popular household pets. The owner of the local pet store decided to breed more hamsters, but he wanted to make sure that they were brown hamsters. He knew that brown fur was a dominant trait, so he mated a brown female with a brown male. To his surprise, the female hamster gave birth to both black and brown hamsters. What was the genotype of each adult hamster? Explain your answer.

Answer: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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