**Name:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Date:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Period: \_\_\_\_\_ 4.**Mendelian Di-Hybrid Practice

**Dihybrid Cross Practice**

Dimples are a dominant trait (D). Not having dimples is a recessive trait (d).

Unattached earlobes are dominant (E). Attached earlobes are recessive (e).

Having freckles is a dominant trait (F). Not having freckles is recessive (f).

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



1. If the father is heterozygous for earlobes and recessive for freckles, and the mother is homozygous recessive for earlobes and dominant for freckles, what are the chances that their offspring will have attached earlobes?

Use the Punnett square to support your answer.



1. Dimples are a dominant trait (D). Not having dimples is a recessive trait (d).

Unattached earlobes are dominant (E). Attached earlobes are recessive (e).

If the mother and father are heterozygous for both traits, what are the chances that their children will have dimples?

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

Use the Punnett square to support your answer.



1. Dimples are a dominant trait (D). Not having dimples is the recessive trait (d).

Having freckles is a dominant trait (F). Not having freckles is recessive (f).

If the mother is homozygous dominant for both traits and the father is homozygous recessive for both traits, what are the chances they have children with dimples and freckles?

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

Use the Punnett square to support your answer.



1. Having a widow’s peak is a dominant trait (H). Having a straight hairline is a recessive trait (h). Having unattached earlobes is dominant (E). Having attached earlobes is recessive (e).

If the father is homozygous dominant for both traits, what is his genotype?

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

If the mother has a straight hairline and attached earlobes, what is her genotype?

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

1. In the above scenario, what are the possible genotypes of their children?



1. A mother has a widow’s peak (homozygous) and no freckles, and her husband has a straight hairline and no freckles.

Is it possible for their daughter to have a straight hairline and freckles?

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

1. A mother with a straight hairline and who is heterozygous for dimples
marries a man with a widow’s peak (homozygous) and no dimples.
What are the possible traits of their children?

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1. A man who is homozygous for unattached earlobes and heterozygous for freckles marries a woman who has attached earlobes and no freckles.

What are their genotypes?

What are the chances that their children will have unattached earlobes and freckles?

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



1. If the mother and father are both heterozygous for dimples and earlobes, what are their genotypes?

Write your answer in the Punnett square on the right.

What is the probability that they will have children with dimples and unattached earlobes?

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



1. A woman who is heterozygous for freckles and a widow’s peak marries a man who is also heterozygous for freckles and has a straight hairline.

What are the chances that their children will have freckles?

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