

Name\_

## **Student Data Table**

Trait	Group Total	Class Totals	D = dominant R = recessive
Tongue roller			D
Non-roller			R
Widow's peak			D
Straight hairline			R
Free earlobe			D
Attached earlobe			R
Freckles			D
No freckles			R
Hitchhiker's thumb			D
Straight thumb			R
Mid-digital hair			D
No mid-digital hair			R
Curly hair			D
Straight hair			R
PTC taster			D
PTC Non-taster			R

Write a + in the box if agglutination is observed and a – if no change occurs.

Person	Anti-a sera	Anti-b sera	Anti-Rh sera	Blood Type

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## Dominant vs. Recessive Traits Chart

	Colder		A
Tongue roller	Non-tongue roller	Hitchhiker's thumb	Straight thumb
Widow's peak	Straight hairline	Mid-digital hair	No mid-digital hair
Free earlobe	Attached earlobe	Curly hair	Straight hair
Freckles	No freckles	PTC Taster	PTC Non-taster

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## **Post-Lab Questions**

1. A mother and father both have a phenotype of attached earlobes (a recessive trait). Is it possible for them to give birth to a child with free earlobes (a dominant trait). Explain. Draw the Punnett square, if needed.

2. Use the Hardy-Weinberg equation to find the probable genotypes of your classmates for the trait of PTC tasting.

q =

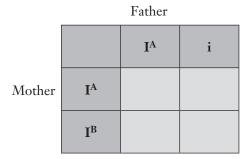
p =

Homozygous dominant: \_\_\_\_%

Heterozygous: \_\_\_\_%

Homozygous recessive: \_\_\_\_%

3. Complete the following Punnett square for blood types.



Square 3 (*Hint:* Remember co-dominance.)

Square 3

Homozygous dominant = \_\_\_\_%

Heterozygous = \_\_\_\_%

Homozygous recessive = \_\_\_\_%

Do these percentages add up to 100%?

4. For the blood types shown above, what will be the observed phenotype for each genotype?

## Genotype Phenotype

5. The person from which the unknown blood sample came from is having a child. Is there any possibility this person could have a child with type O blood? Explain.

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