

Name : _____ Date: _____

Homozygous and Heterozygous

An organism inherits one allele for a gene from each parent. The combination of genes the organism has is called genotype.

If the organism inherits two of the same gene, the genotype is homozygous.

If it inherits two different genes, it is heterozygous.

To represent a genotype, two letters are used. A capital letter (**B**) for the dominant trait and a lower case (**b**) letter for a recessive. The genotype of an organism can identify how the phenotype (observable traits) looks.

(Note: You can designate a letter of your choice)

Homozygous dominant: BB **Homozygous recessive:** bb **Heterozygous:** Bb

Examples: Identify the given genotype. Write whether it is Homozygous dominant (**HD**), Homozygous recessive (**HR**), or Heterozygous (**HE**)

a) **GG**: HD
(both uppercase)

b) **jj**: HR
(both lowercase)

c) **Pp**: HE
(one uppercase and one lowercase)

Your Turn!

I: Identify the genotype below. Use the following Homozygous dominant (**HD**), Homozygous recessive (**HR**), or Heterozygous (**HE**)

AA:

Dd:

gg:

BB:

Ee:

hh:

CC:

Ff

ii:

Ee:

hh:

KK