

### Definition of Breeding Value

For animal  $i$  with genotype  $G_k G_l$  at locus  $G$  is two times the difference of the mean ( $\mu_{kl}$ ) of a large number of offspring of animal  $i$  from the population mean.

( $\mu$ )

BV for an animal with genotype  $G_k G_l$  is

$$BV_{kl} = 2(\mu_{kl} - \mu)$$

Example: Genotype  $G_1 G_1$ :

$$BV_{11} = 2(\mu_{11} - \mu) = 2q[a + (q-p)d]$$

Exercise 2:  $BV_{12} = \dots$  |  $BV_{22} = \dots$

Recall: