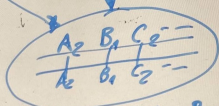
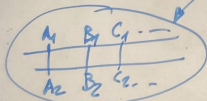
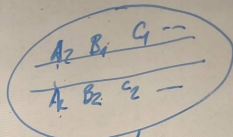
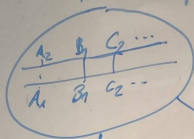


# Breeding Values of parents and offspring

Parents  $\Rightarrow$  Breeding value of  $s: u_s$

Parent of  $d$ : Breeding value of  $d: u_d$



Offspring  $i$   
Breeding value for  $i: u_i$

Offspring  $j$ : Breeding value:  $u_j$

$$u_i = \frac{1}{2} u_s + \frac{1}{2} u_d + m_i$$

$$u_j = \underbrace{\frac{1}{2} u_s + \frac{1}{2} u_d}_{\text{parent average}} + m_j$$

parent average

Mendelian Sampling terms, measure deviation of an animal's breeding value from the parent average.