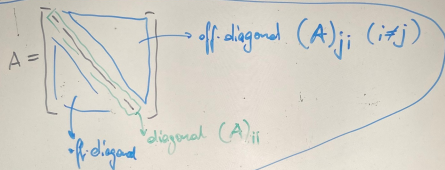


General Rule for any off diagonal element in A

$$(A)_{ji} = \frac{1}{2} (A)_{js} + \frac{1}{2} (A)_{jd} \quad \text{if animals } s \text{ and } d \text{ are parents of animal } i$$



• Diagonal elements $(A)_{ii}$:

$$(A)_{ii} = 1 + F_i \quad \text{where } F_i \text{ inbreeding coefficient of animal } i; F_i \text{ corresponds to } \frac{1}{2} \text{ times the additive relationship of parents } s \text{ and } d$$

Example: Pedigree