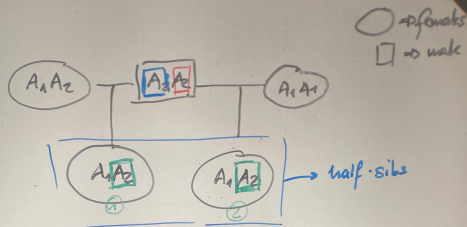Example:

○ → females
□ → male

→ half-sibs

What is the kinship coefficient between half-sibs?

⟹ What is the probability of $\overline{A_2}$ in half-sib ① is identical by descent with $\overline{A_2}$ in half-sib ②

• Probability that half sib ① inherits A_2 from the father is 1/4. The same for half-sib ②: 1/4

• These two events occuring together has probability of $1/4 \cdot 1/4 = 1/16$

• The same applies to the red ancestral allele A_2 For both offspring to inherit the red A_2, the probability is 1/16

• Kinship coefficient: $1/16 + 1/16 = 1/8$