Livestock Breeding and Genomics - Exercise 10

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Problem 1: Compute Inbreeding Coefficients

Given the following pedigree.

Animal	Sire	Dam
1	NA	NA
2	NA	NA
3	1	NA
4	3	2
5	4	2
6	4	5

Your Task

Compute the inbreeding coefficients F_i for all animals using the matrix R that comes from the cholesky decomposition of the numerator relationship matrix A

Problem 2: Direct Construction of A^{-1}

Use the pedigree from problem 1 and the computed inbreeding coefficients from problem 1 to set up the inverse numerator relationship matrix A^{-1} using the general form of Henderson's rules for a pedigree with inbred animals. Compare your result using function `pedigreemm::getAInv()`.