Mathematics for Computing
Digraphs and Relations

1 Digraphs and Relations

Given a flock of chickens, between any two chickens one of them is dominant. A relation, R, is defined between chicken x and chicken y as xRy if x is dominant over y. This gives what is known as a pecking order to the flock. Home Farm has 5 chickens: Amy, Beth, Carol, Daisy and Eve, with the following relations:

- Amy is dominant over Beth and Carol

- Beth is dominant over Eve and Carol

- Carol is dominant over Eve and Daisy

- Daisy is dominant over Eve, Amy and Beth

- Eve is dominant over Amy.

Types of Relations

- Antisymmetric
- Symmetric
- Reflexive
- Transitive