IDS Lecture 5: Relational Algebra on Sets

Divison R over a set of attributes X
S over a set of attributes $Y \subset X$
Let $Z = X - Y$
$R \div S = \{r \in \pi_Z(R) \,|\, \forall s \in S, rs \in R\}$
$= \{r \in \pi_Z(R) \,|\, \{r\} \times S \subseteq R\}$
$= \pi_Z(R) - \pi_Z(\pi_Z(R) \times S - R)$

Note: I don't really understand