

Zaccheus Sheehan Sia

17032467

$r1 : \forall X,Y,r \text{ OnChair}(X, r) \wedge \text{OnChair}(Y, r) \Rightarrow X = Y$
$r2 : \forall r,s \text{ OnChair}(A, r) \wedge \text{OnChair}(B, s) \Rightarrow r - s \neq 1$
$r3 : \forall r,s \text{ OnChair}(B, r) \wedge \text{OnChair}(C, s) \Rightarrow r - s = 1$
$r4 : \forall r \text{ OnChair}(D, r) \vee \text{OnChair}(E, r) \Rightarrow r \neq 1 \wedge r \neq 5$
$r5 : \forall r,s \text{ OnChair}(C, r) \wedge \text{OnChair}(D, s) \Rightarrow r - s \neq 1$
$r6 : \forall r,s \text{ OnChair}(A, r) \wedge \text{OnChair}(E, s) \Rightarrow r - s = 2$

$r1$ = No two persons can be seated on the same chair.

$r2$ = Persons A and B are not seated next to each other.

$r3$ = Persons B and C are seated next to each other.

$r4$ = Both persons D and E are not seated on chairs 1 or 5.

$r5$ = Persons C and D are not seated next to each other.

$r6$ = Persons A and E have a 1 seat gap between them.

