

# Appendix : WFF 'N Proof WFF 'N Proof – A Game of Symbolic Logic

## Creating a WFF

Single Letter WFF – p, q, r, s

2 Letter WFFs – Np, Nq, Nr, Ns

3 Letter WFFs – Use a CAKE letter and 2 single WFFs after the CAKE letter – Cpq, Ars, Kqr, Eps

3 or more letter WFFs – CAKE letters connect WFFs together to make longer WFFs – KrAsp, EKrqS, AEspKsr

## First 7 Rules

K out	Ko	$Kw_1w_2 \text{ -----} \rightarrow w_1 \text{ or } w_2$
K in	Ki	$w_1, w_2 \text{ -----} \rightarrow Kw_1w_2 \text{ or } Kw_2w_1$
Repetition	Rp	$w_1 \text{ -----} \rightarrow w_1$ (any WFF $\rightarrow$ any WFF)
A in	Ai	$w_1 \text{ or } w_2 \text{ -----} \rightarrow Aw_1w_2$
C out	Co	$Cw_1w_2, w_1 \text{ -----} \rightarrow w_2$
E out	Eo	$Ew_1w_2 \text{ -----} \rightarrow Cw_1w_2 \text{ or } Cw_2w_1$
E in	Ei	$Cw_1w_2, Cw_2w_1 \text{ -----} \rightarrow Ew_1w_2 \text{ or } Ew_2w_1$

## Next 5 Rules: These rules use sub-proofs

C in	Ci	$w_1 \rightarrow w_2$ (in a sub-proof) $\text{-----} \rightarrow Cw_1w_2$
A out	Ao	$Aw_1w_2, w_1 \rightarrow w_3$ (sub-proof), $w_2 \rightarrow w_3$ (sub-proof), $\text{---} \rightarrow w_3$
N out	No	$Nw_1 \rightarrow w_2, Nw_2$ (sub-proof) $\text{-----} \rightarrow w_1$
N in	Ni	$w_1 \rightarrow w_2, Nw_2$ (sub-proof) $\text{-----} \rightarrow Nw_1$
Reiteration	R	Brings a WFF from outside a sub-proof to inside a sub-proof.