Serie Normalización

① Sea R(A,B,C,D,E,F,G,H)

AB → C	ABCDEFGH⁺ → {...} sk
F → GH	AB⁺ → {...} sk → Ck
A → DE	A⁺ → {A,D,E}
B → F	B⁺ → {B,F,G,H}

Cks: {AB}   Pk: {AB}
Ap: {A,B}
nAP: {C,D,E,F,G,H}

1FN → Se cumple ✓

2FN: AB⁺ → {...}

A⁺ → {A,D,E} no cumple
B⁺ → {B,F,G,H}

R1: (A,D,E) ✓
R2: (B,F,G,H)
R3: (A,B,C)

3FN: R1: AP → nAP
R2: AP → nAP no cumple
R3: Ap → nAP

R2: (B,F) ✓
R2': (F,G,H)

② Sea R(A,B,C,D,E)

BC → ADE	ABCDE⁺ → {...} sk
D → B	BC⁺ → {...} sk
	B⁺ → {B}
	C⁺ → {C}

Cks: {BC, DC}   Pk: {BC}
APs: {B,C,D}
nAPs: {A,E}

1FN → Se cumple ✓

2FN BC⁺ → {...}

B⁺ → {B} sí cumple ✓
C⁺ → {C}

DC → {...}
D⁺ → {D,B}

3FN:
BC → ADE: AP → nAP ✓ sí
AP → AP cumple
D → B: AP → AP

③ Sea R(W,X,Y,Z)

Z → W	WXYZ⁺ → {...} sk	WXZ⁺ → {...} sk
Y → XZ	XYZ⁺ → {...} sk	XZ⁺ → {...} sk Ck
W X → Y	Y⁺ → {...} Ck	X⁺ → {X,Y}
		Z⁺ → {Z,W}

Cks: {Y, XZ}
APs: {Y, X, Z}
nAPs: {W}
Pk: {Y}

$1FN \rightarrow$ se cumple ✓

$2FN:$ $XZ+ \rightarrow \{...\}$
$X+ \rightarrow \{X,Y\}$
$Z+ \rightarrow \{Z,W\} \rightarrow$ no cumple

$3FN$
$R1(X,Y,Z)$ / $XYZ \rightarrow \{...\}: APs \rightarrow APs$ ✓
$R2(Z,W)$ $Z \rightarrow \{W\}: AP \rightarrow nAP$ ✓

(4c) $R(A,B,C,D,E,F,G,H)$

$CH \rightarrow G$
$A \rightarrow BC$
$B \rightarrow CFH$
$E \rightarrow A$

$ABCDEFGH+ \rightarrow \{...\} \rightarrow Sk$
$DEFH+ \rightarrow \{...\} Sk$
$DE+ \rightarrow \{...\} sk \rightarrow Ck$
$D+ \rightarrow \{D\}$
$E+ \rightarrow \{E,A,B,C,F,H,G\}$

$Cks: \{DE\}$	$Pk: \{DE\}$

$APs: \{D,E\}$
$nAPs: \{A,B,C,F,G,H\}$

$1FN \rightarrow$ se cumple ✓

$2FN:$ $DE+ \rightarrow \{...\} sk$
$D+ \rightarrow \{D\}$
$E+ \rightarrow \{E,A,B,C,F,H,G\}$

$3FN:$ $R1: AP \rightarrow nAPs$ ✓
$R2: AP \rightarrow AP$

$\hookrightarrow R1(E,A,B,C,F,H,G)$ ✓
$R2(D,E)$

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(7) $R(A,B,C,D,E,F,G,H)$

$A \rightarrow H$
$AD \rightarrow G$
$AB \rightarrow C$
$BD \rightarrow EF$

$ABCDEFGH+ \rightarrow \{...\} sk$
$ABD+ \rightarrow \{...\} sk$
$AB+ \rightarrow \{A,B,H,C\}$
$AD+ \rightarrow \{A,D,H,G\}$
$BD+ \rightarrow \{B,D,E,F\}$

$Cks: \{ABD\}$	$Pk: \{ABD\}$

$APs: \{A,B,D\}$
$nAPs: \{C,E,F,G,H\}$

$1FN \rightarrow$ se cumple ✓

$2FN:$ $ABD+ \rightarrow \{...\}$
$A+ \rightarrow \{A,H\} \rightarrow$ no cumple
$B+ \rightarrow \{B\}$
$D+ \rightarrow \{D\}$

$R1: (A,B,D,C,E,F,G)$
$R2: (A,H)$

$3FN:$ $R1: AP \rightarrow nAPs$
$R2: AP \rightarrow nAP$ ✓

sí cumple

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(11) $R(A,B,C,D)$

$AB \rightarrow CD$
$D \rightarrow B$
$C \rightarrow A$

$AB+ \rightarrow \{...\} ck$
$CD+ \rightarrow \{...\} CK$

$Cks: \{AB, CD\}$
$APs: \{A,B,C,D\}$
$nAPs: \{\}$
$Pk: \{AB\}$

$1FN \rightarrow$ se cumple ✓

$2FN \rightarrow$ $AB+ \rightarrow \{...\}$
$A+ \rightarrow \{A\}$
$B+ \rightarrow \{B\}$

$CD+ \rightarrow \{...\}$
$C+ \rightarrow \{C,A\}$ sí cumple
$D+ \rightarrow \{D,B\}$

$3FN \rightarrow$ No se puede dar
$nAP \rightarrow nAP \longrightarrow$ sí cumple ✓