Solitaire Language.

A 1

B 011

C 110

D $11(01)^*00(10)^*11$

E $11(01)^*00(11)^+(10)^*11$

F $11(01)^*(11)^+00(10)^*11$

G $11(01)^*(11)^*1011(10)^*11$

H $11(01)^*1101(11)^*(10)^*11$

I $11(01)^*(11)^*01$

J $10(11)^*(10)^*11$

Hopping:
$1101 \to 0011$ and so $11(01)^* \to 11$.
Similarly, $(10)^*11 \to 11$.
So we can reduce the above cases to

A 1

B 011

C 110

D 110011

E $1100(11)^+$

F $(11)^+0011$

G $(11)^+101111$

H $111101(11)^*$

I 110

J 011

Then

- $B \to A$
- $C \to A$
- $D \to I$
- $E \to J$
- $F \to I$
- $G \to F$
- $H \to E$

Unhopping
$001 \to 110$ or $100 \to 011$.
So,

- $A \leftarrow B \vee C$
- $B \leftarrow I \vee J$
- $C \leftarrow I \vee J$
- $D \leftarrow D \vee E \vee F$
- $E \leftarrow E \vee H$
- $F \leftarrow F \vee G$
- $G \leftarrow G$
- $H \leftarrow H$
- $I \leftarrow I \vee D \vee F$
- $J \leftarrow J \vee E \vee D$