$A(c) \rightarrow D(c)$

Note Title 3/13/2015

Quiz 3 #2.

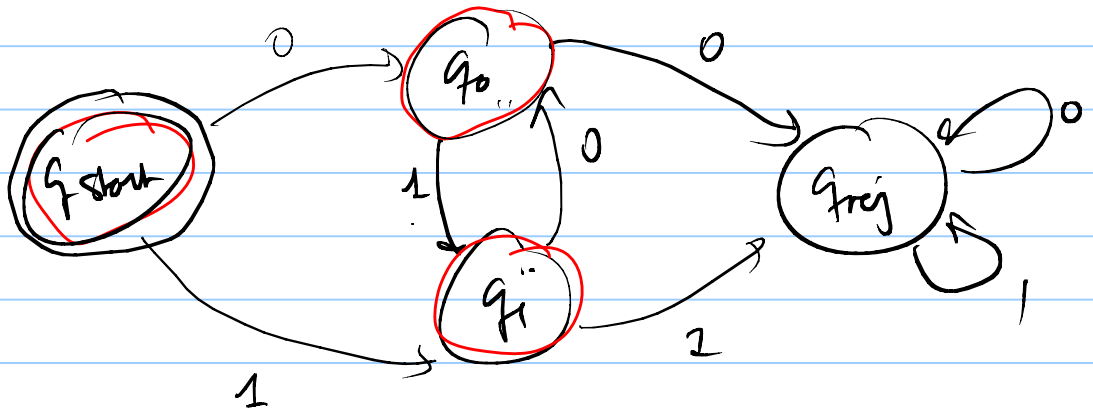
2. Exist Instr (1)

3. $A(c)$.

4. $A(c) \rightarrow D(c)$.

5. $D(c)$ Mod Powers 3 & 4.

6 $\exists x\, D(x)$. Exist Gen, 5.



Quiz 3 #1

a) $p = q = T$

b) Valid

c) Valid.

d) $p = T$
$q = F$

Thm If n is an integer & n^3 is even then n is even.

Pf. Assume n is an int and n is not even

prove n^3 is not even.

n is odd $\Rightarrow$ $n = 2k+1$ for some int k.

$$n^3 = (2k+1)^3 = 8k^3 + 4k^2 + 2k + 1$$

$$= 2(4k^3 + 2k^2 + k) + 1$$

$4k^3 + 2k^2 + k$ is an int $\therefore$

n^3 is odd.

$\boxtimes$

$$\neg(x \vee y) \equiv \neg x \wedge \neg y.$$

xTy x is taller than y.

a) xTx x is taller than x?
never!

anti-reflexive.

$xTy \wedge yTx \Rightarrow x = y$.

anti Symmetric.

$xTy \wedge yTz \overset{?}{\rightarrow} xTz$ Transitive!

$X \neq y \Rightarrow xRy \vee yRx$.

$(x,y) \overset{?}{\in} R_1 \circ R_2 \iff \exists z.$

$(x,z) \in R_2$

$(z,y) \in R_1$

$x > z$

$z \leq y.$

$(x,y) \in R_1 \circ R_2 \iff \exists z \quad x > z$

$z \leq y.$

$R_1 \circ R_2 = \mathbb{R} \times \mathbb{R}.$