① $\{q(n, x, x)\}$

$\{q(c(X, Y), z, c(x, w)), \neg q(y, z, w)\}$

$\therefore q(\underbrace{x}_{x}, \underbrace{c(2, n)}_{y}, c(\underbrace{1}_{z}, \underbrace{c(2, n)}_{w}))$

$\{\neg q(c(2, n), 1, c(2, n))\}$

$\{\neg q(n, c(2, n), c(2, n))\}$

$\{\}$

(2) $\{p(n,n)\}$

$\{p(c(x,y), c(x,z)) ; \neg p(y,z)\}$

$\{p(c(x,y), z) ; \neg p(y,z)\}$

$\therefore p(c(\underset{x}{1}, c(\underset{y}{2}, \underbrace{c(3,n)}_{z})), \underbrace{c(2,n)}_{w})$

$\rightarrow \{\neg p(\underset{z}{2}, c(\underset{x}{3}, \underset{y}{n}))\}$

$\{\neg p(c(3,n), c(3,2))\}$

$\{\neg p(n,2)\}$