$$\underbrace{2(X+y)}_{\text{length of fast}} - \underbrace{(X+y)}_{\substack{\text{length of} \\ \text{slow}}} = \underbrace{NC}_{\substack{\text{length of} \\ \text{cycle}}}$$

$$X + y = NC \implies X = NC - y$$

Let slow continue to travel from $(X+y)$ and head travel one step at a time

After X steps head and slow will meet at the begin of cycle