5 Suppose $xH \cap yH \neq \emptyset$. Then $\exists z \in xH \cap bH \Rightarrow \exists h_1, h_2 \in H$ such that $z = xh_1$ and $z = bh_2$. Thus,

$$x = zh_1^{-1} = yh_2h_1^{-1} \text{ and } xH = yh_2h_1^{-1}H = y(h_2h_1^{-1}H) = yH$$

Therefore, $xH = yH$

6 Suppose that $x^{-1}y = h \in H$. Let $xk \in xH$ with $k \in H$. Then we have, $xk = (yh^{-1})k = y(h^{-1}k) \in bH$. Thus, $xH \subseteq yH$
The proof of $yH \subseteq xH$ is similar.
Therefore, $xH = yH$