

Reading Quiz §7

1. Consider Example 1 in Chapter 7 where $G = S_3$ and $H = \{(1), (13)\}$.

(a) [2] Find the *right* cosets of H in G .

(b) [1] Find $H(12) \cap H(13)$.

2. True/False: If the statement is *always* true, give a *brief* explanation of why it is (not a formal proof!). If the statement is false, give a counterexample. Let G and H be groups with $H \leq G$. Let $g \in G$

(a) [1] $g \in gH$.

(b) [1] gH is a subgroup of G .