Reading Questions 17

page 95: Definition 4.24

1. The set $N_G(H)$ is the normalizer of H in G.
2. The set $N_G(H)$ is the stabilizer of H in G.
3. Let $G = Z_4$ and let $H =< 2 >$. What is $N_G(H)$?

Section 4.3 Stabilizers (Part 1)

Cayley Graphs

P 1. Let D_8 act on $\{1, 2, 3, 4\}$. Let $S = \{a, ab\}$. Draw the Cayley graph.

Stabilizers

P 2. Let D_8 act on $\{1, 2, 3, 4\}$. Find $\text{Stab}_{D_8}(3)$.

P 3. Let S_4 act on $\{1, 2, 3, 4\}$ defined by the action $\sigma \cdot a = \sigma(a)$. Find $\text{Stab}_{S_4}(2)$.

P 4. Let G be a group and $g \in G$. In the action of G on G by conjugation, $\text{Stab}_G(g) = \text{C}_G(g)$.