Example for the Definition of the Potential Function

In this example, we take $k = 3$ and $t = 8$. Let $\mathcal{R}_t = \{R_1, R_2, R_3, R_4, R_5\}$ and the values of R_1, R_2, R_3, R_4, R_5 are shown in the figure below.

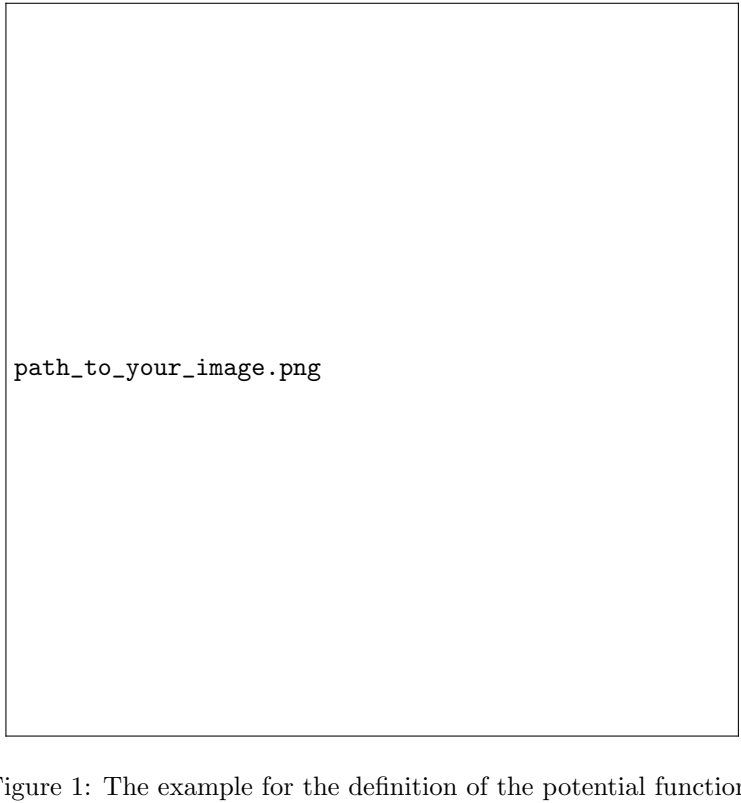

Figure 1: The example for the definition of the potential function.

We calculate $\phi_t(2, 0)$ and $\phi_t(2, 3)$ as examples:

- For $\phi_t(2, 0)$, the max operator in eq.k-counter-phi is taken over $R \in \{R_1, R_3\}$, and the maximum is 4, which is achieved when $R = R_3$.
- For $\phi_t(2, 3)$, the max operator in eq.k-counter-phi is taken over $R \in \{R_1, R_4\}$, and the maximum is 3, which is achieved when $R = R_4$.