$$\omega$$

$$r_1^t \Rightarrow r_{[t,\infty)}$$
$$r_2^t \Rightarrow r_{[t,t)=\emptyset}, r_{[t,\infty)}$$
$$r_3^t \Rightarrow r_\emptyset, r_{[t,t)=\emptyset}, r_{[t,\infty)}$$