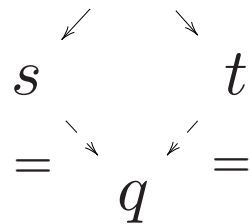- $\mathcal{R}$ is *non-overlapping* iff it does not have any critical pairs.

- $\mathcal{R}$ is *left-linear* iff its left-hand sides do not contain multiple occurrences of the same variable.

- $\mathcal{R}$ is *orthogonal* iff it is non-overlapping and left-linear.

- *Strong Confluence* implies confluence (Thm. 5.3.6)

$$
\begin{array}{ccc}
 & p & \\
\swarrow & & \searrow \\
s & & t \\
= & \searrow \quad \nwarrow & = \\
 & q &
\end{array}
$$

- *Parallel Reduction Relation:* $s \Rrightarrow_{\mathcal{R}} t$ iff there exist

  − a set $\Pi = \{\pi_1, \ldots, \pi_n\}$ of pairwise independent positions of s
  − rules $l_i \to r_i \in \mathcal{R}$
  − substitutions σ_i

  with $s|_{\pi_i} = l_i \sigma_i$ and $t = s[r_1 \sigma_1]_{\pi_1} \ldots [r_n \sigma_n]_{\pi_n}$.