

$$\frac{L|L}{\underline{t}|t} \frac{r|r}{\#|\#} = \frac{Lr + \#L}{\underline{t}\# + r\underline{t}} \frac{rL + Lr}{\#t + \underline{t}\#}$$

$$\left[ \frac{L|L}{\underline{t}|t} \quad \frac{r|r}{\#|\#} \right]$$

$$\left[ \frac{L|L}{\underline{t}|t} \quad \frac{r|r}{\#|\#} \right] \left[ \frac{L|L}{\underline{t}|t} \quad \frac{r|r}{\#|\#} \right]^* \left[ \frac{L|L}{\underline{t}|t} \quad \frac{r|r}{\#|\#} \right]$$

$$= \left[ \frac{L|L}{\underline{t}|t} \quad \frac{r|r}{\#|\#} \right] \begin{bmatrix} \underline{t} & \underline{t} \\ L & L \\ r & r \\ \# & \# \end{bmatrix} \left[ \frac{L|L}{\underline{t}|t} \quad \frac{r|r}{\#|\#} \right]$$

$$= \underbrace{\frac{L|L}{\underline{t}|t} \frac{t|t}{L|L} + \frac{r|r}{\#|\#} \frac{r|r}{\#|\#}}_{\text{}} \left[ \frac{L|L}{\underline{t}|t} \quad \frac{r|r}{\#|\#} \right]$$

$$= \left[ \frac{L|L}{\underline{t}|t} \frac{t|t}{L|L} \frac{L|L}{\underline{t}|t} + \frac{r|r}{\#|\#} \frac{r|r}{\#|\#} \frac{L|L}{\underline{t}|t} \frac{L|L}{\underline{t}|t} \frac{t|t}{L|L} \frac{r|r}{\#|\#} + \frac{r|r}{\#|\#} \frac{r|r}{\#|\#} \frac{r|r}{\#|\#} \frac{r|r}{\#|\#} \frac{r|r}{\#|\#} \right]$$