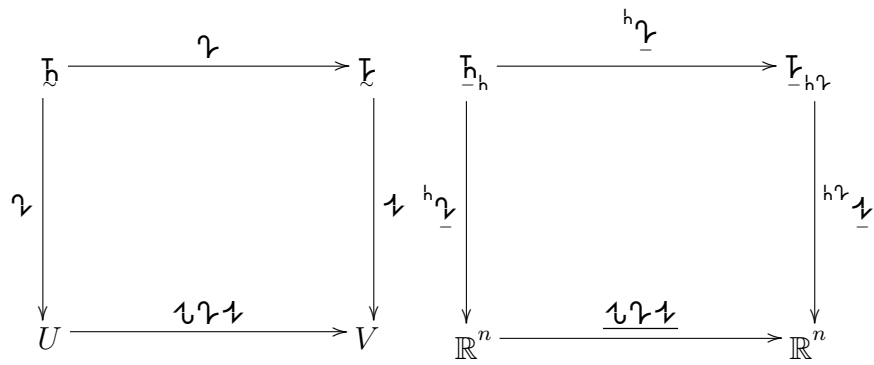


$$\int_{\bar{\gamma}} \gamma = \int_U \overleftarrow{\underline{1} \underline{1}^*} \underline{1} \times \gamma: \quad \int_{\bar{\gamma}} 1 = \int_V \overleftarrow{\underline{1} \underline{1}^*} \underline{1} \times 1$$



$${}_i \underline{1} = {}_i \underline{1} \underline{1} \Rightarrow {}_i \underline{1} \times {}_j \underline{1} = {}_i \underline{1} \underline{1}^* {}_j \underline{1} = {}_i \underline{1} \underline{1} \overbrace{{}_j \underline{1} \underline{1}^*}^* = {}_i \underline{1} \underline{1} \underline{1}^* {}_j \underline{1} \Rightarrow \overleftarrow{{}_i \underline{1} \times {}_j \underline{1}} = \overleftarrow{{}_i \underline{1} \underline{1}^*}$$

$${}_m \underline{1} = {}_m \underline{1} \underline{1} \Rightarrow {}_m \underline{1} \times {}_n \underline{1} = {}_m \underline{1} \underline{1}^* {}_n \underline{1} = {}_m \underline{1} \underline{1} \overbrace{{}_n \underline{1} \underline{1}^*}^* = {}_m \underline{1} \underline{1} \underline{1}^* {}_n \underline{1} \Rightarrow \overleftarrow{{}_m \underline{1} \times {}_n \underline{1}} = \overleftarrow{{}_m \underline{1} \underline{1}^*}$$

$$\overbrace{\underbrace{x \quad x^*}_{1/2}}^{1/2} \overbrace{\underbrace{\tau_h \tau_{h^*}}_{\tilde{\tau}_h}}^k = \overbrace{\underbrace{x \quad \tau_h \tau_{h^*}}_{1/2}}^k \overbrace{\underbrace{\tau_y \tau_{y^*}}_{1/2}}^{1/2}$$

$$\begin{array}{ccc} \mathbb{R}^h & \xrightarrow{\tau_h^k} & \mathbb{R}_{\tau_h} \\ \downarrow \overbrace{\underbrace{x \quad x^*}_{1/2}}^{\tau_x} & & \uparrow \overbrace{\underbrace{\tau_y \tau_{y^*}}_{-1/2}}^{\tau_y} \\ \mathbb{R}^n & \xrightarrow[\overbrace{\underbrace{x \quad x^*}_{-1/2}}^{\tau_x} \quad \overbrace{\underbrace{\tau_h \tau_{h^*}}_{1/2}}^{\tau_y}]{\text{bic}} & \mathbb{R}^n \end{array}$$

$$\overbrace{\underbrace{x \quad x^*}_{-1/2}}^{\tau_x} \overbrace{\underbrace{\tau_h \tau_{h^*}}_{1/2}}^{\tau_y} = 1 \Rightarrow \overbrace{\underbrace{\tau_y \tau_{y^*}}_{-1/2}}^{\tau_y} \overbrace{\underbrace{\tau_x \tau_{x^*}}_{1/2}}^{\tau_x} = 1$$

$$\begin{aligned} \overbrace{\underbrace{\tau_h \tau_{h^*}}_{\tilde{\tau}_h}}^k &= \overbrace{\underbrace{x \quad x^*}_{-1/2}}^{\tau_x} \overbrace{\underbrace{\tau_h \tau_{h^*}}_{1/2}}^{\tau_y} \overbrace{\underbrace{\tau_x \tau_{x^*}}_{1/2}}^{\tau_x} = \overbrace{\underbrace{x \quad x^*}_{-1/2}}^{\tau_x} \overbrace{\underbrace{\tau_h \tau_{h^*}}_{1/2}}^{\tau_y} \overbrace{\underbrace{\tau_y \tau_{y^*}}_{-1/2}}^{\tau_y} \overbrace{\underbrace{\tau_x \tau_{x^*}}_{1/2}}^{\tau_x} \\ &= \overbrace{\underbrace{x \quad x^*}_{-1/2}}^{\tau_x} \overbrace{\underbrace{\tau_h \tau_{h^*}}_{1/2}}^{\tau_y} \overbrace{\underbrace{\tau_y \tau_{y^*}}_{-1/2}}^{\tau_y} \overbrace{\underbrace{\tau_x \tau_{x^*}}_{1/2}}^{\tau_x} = \overbrace{\underbrace{x \quad x^*}_{-1/2}}^{\tau_x} \overbrace{\underbrace{\tau_h \tau_{h^*}}_{1/2}}^{\tau_y} \overbrace{\underbrace{\tau_y \tau_{y^*}}_{1/2}}^{\tau_y} \end{aligned}$$

$$\int_{\tau} 1 = \int_{\tilde{\tau}} \tau \times 1$$

$$\begin{aligned} \text{LHS} &= \int_V \overbrace{\underbrace{\tau \tau^*}_{1/2}}^{1/2} \tau \times 1 \stackrel{\text{trafo}}{=} \int_U \overbrace{\underbrace{\tau \tau^*}_{1/2}}^{\tau} \overbrace{\underbrace{\tau \tau^*}_{1/2}}^{\tau} \times \overbrace{\underbrace{\tau \tau^*}_{1/2}}^{1/2} \tau \times 1 = \int_U \overbrace{\underbrace{\tau \tau^*}_{1/2}}^{\tau} \overbrace{\underbrace{\tau \tau^*}_{1/2}}^{\tau} \times \overbrace{\underbrace{\tau \tau^*}_{1/2}}^{1/2} \tau \times 1 \\ &= \int_U \overbrace{\underbrace{\tau \tau^*}_{1/2}}^{\tau} \overbrace{\underbrace{\tau \tau^*}_{1/2}}^{\tau} \times \overbrace{\underbrace{\tau \tau^*}_{1/2}}^{1/2} \tau \times 1 = \int_U \overbrace{\underbrace{\tau \tau^*}_{1/2}}^{\tau} \tau \times \overbrace{\underbrace{\tau \tau^*}_{1/2}}^{\tau} \tau \times 1 = \int_U \overbrace{\underbrace{\tau \tau^*}_{1/2}}^{1/2} \tau \times \overbrace{\underbrace{\tau \tau^*}_{1/2}}^{\tau} \tau \times 1 = \text{RHS} \end{aligned}$$