

6.13 Soient $u, v \in F$ et $\alpha \in \mathbb{R}$.

Posons $u^\star = h^{-1}(u)$ et $v^\star = h^{-1}(v)$. Alors $h(u^\star) = u$ et $h(v^\star) = v$.

$$\begin{aligned} 1) \quad h^{-1}(u + v) &= h^{-1}(h(u^\star) + h(v^\star)) \\ &= h^{-1}(h(u^\star + v^\star)) \\ &= u^\star + v^\star \\ &= h^{-1}(u) + h^{-1}(v) \end{aligned}$$

$$\begin{aligned} 2) \quad h^{-1}(\alpha \cdot u) &= h^{-1}(\alpha \cdot h(u^\star)) \\ &= h^{-1}(h(\alpha \cdot u^\star)) \\ &= \alpha \cdot u^\star \\ &= \alpha \cdot h^{-1}(u) \end{aligned}$$