Theorem 75 *$S \subseteq B'$.*

Proof Let $x \in S$. Then $Ex \in R$; $M(Ex) = E^{-1}Ex = x$; $x \in \operatorname{im} M = B'$. □

Obvious 24 *E is a bijection from S to R.*

Theorem 76 *M is a bijection from B to B'.*

Proof Surjectivity of M is obvious. Let's prove injectivity. Let $a, b \in B$ and $M(a) = M(b)$. Consider all cases:

$a, b \in R$ $M(a) = E^{-1}a$; $M(b) = E^{-1}b$; $E^{-1}a = E^{-1}b$; thus $a = b$ because E^{-1} is a bijection.

$a \in R$**,** $b \notin R$ $M(a) = E^{-1}a$; $M(b) = (t; b)$; $M(a) \in S$; $M(b) \notin S$. Thus $M(a) \neq M(b)$.

$a \notin R$**,** $b \in R$ Analogous,

$a, b \notin R$ $M(a) = (t; a)$; $M(b) = (t; b)$. Thus $M(a) = M(b)$ implies $a = b$.

□

Theorem 77 *$M \circ E = \mathrm{id}_S$.*

Proof Let $x \in S$. Then $Ex \in R$; $M(Ex) = E^{-1}Ex = x$. □

Obvious 25 *$E = M^{-1}|_S$.*

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