ma-rename[0,22]

ma-rename(rx;ra;rt;M)
$\equiv_{\text{def}}$ mk-ma(rename(rx;1of(M));
     rename(λk.kind-rename(ra;rt;k);1of(2of(M)));
     rename(rx;1of(2of(2of(M))));
     rename(ra;λf,s,v. $f((s \circ rx),v)$ o 1of(2of(2of(2of(M)))));
     rename($\lambda p.\langle$kind-rename(ra;rt;1of(p)), $rx(2of(p))\rangle$
         ;λf,s,v. $f((s \circ rx),v)$ o 1of(2of(2of(2of(2of(M))))));
     rename($\lambda p.\langle$kind-rename(ra;rt;1of(p)), $2of(p)\rangle$
         ;λL.map($\lambda p.\langle rt(1of(p))$, λs,v. $2of(p)((s \circ rx),v)\rangle$;$L$) o
         1of(2of(2of(2of(2of(2of(M)))))));
     rename(rx;λL.map(λk.kind-rename(ra;rt;k);L) o 1of(2of(2of(2of(2of(2of(2of(M))))))));
     rename($\lambda p.\langle 1of(p)$, $rt(2of(p))\rangle$
         ;λL.map(λk.kind-rename(ra;rt;k);L) o
         1of(2of(2of(2of(2of(2of(2of(M))))))));
     rename(λk.kind-rename(ra;rt;k)
         ;λL.map(rx;L) o 1of(2of(2of(2of(2of(2of(2of(2of(M)))))))));
     rename(λk.kind-rename(ra;rt;k);1of(2of(2of(2of(2of(2of(2of(2of(2of(M)))))))));
     rename(rx
         ;λL.map(λk.kind-rename(ra;rt;k);L) o
         1of(2of(2of(2of(2of(2of(2of(2of(2of(M))))))))))

clarification:

ma-rename(rx;ra;rt;M)
$\equiv_{\text{def}}$ mk-ma(fpf-rename(IdDeq;rx;1of(M));
     fpf-rename(KindDeq;λk.kind-rename(ra;rt;k);1of(2of(M)));
     fpf-rename(IdDeq;rx;1of(2of(2of(M))));
     fpf-rename(IdDeq;ra;λf,s,v. $f((s \circ rx),v)$ o 1of(2of(2of(2of(M)))));
     fpf-rename(product-deq(Knd;Id;KindDeq;IdDeq);$\lambda p.\langle$kind-rename(ra;rt;1of(p))
                           , $rx(2of(p))\rangle$;λf,s,v. $f((s \circ rx),v)$ o
  1of(2of(2of(2of(2of(M))))));
     fpf-rename(product-deq(Knd;IdLnk;KindDeq;IdLnkDeq);$\lambda p.\langle$kind-rename(ra;rt;1of(p))
                                , $2of(p)\rangle$;λL.map($\lambda p.\langle rt(1of(p))$
                                       , λs,v.
                                         $2of(p)$
                                         $((s \circ rx)$
                                         ,$v)\rangle$
                                   ;L) o
  1of(2of(2of(2of(2of(2of(M))))));
     fpf-rename(IdDeq;rx;λL.map(λk.kind-rename(ra;rt;k);L) o
  1of(2of(2of(2of(2of(2of(M)))))));
     fpf-rename(product-deq(IdLnk;Id;IdLnkDeq;IdDeq);$\lambda p.\langle 1of(p)$, $rt(2of(p))\rangle$;λL.

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map(λk.kind-rename(ra;rt;k);L) o 1of(2of(2of(2of(2of(2of(2of(M)))))))));
fpf-rename(KindDeq;λk.kind-rename(ra;rt;k);λL.map(rx;L) o
 1of(2of(2of(2of(2of(2of(2of(2of(M))))))))));
fpf-rename(KindDeq;λk.kind-rename(ra;rt;k);1of(2of(2of(2of(2of(2of(2of(2of(
M))))))))))));
fpf-rename(IdDeq;rx;λL.map(λk.kind-rename(ra;rt;k);L) o
 1of(2of(2of(2of(2of(2of(2of(2of(2of(M)))))))))))))