Proof of Theorem 60

The theorem to be proved is

$x \leq x$

Suppose the theorem does not hold. Then, with the variables held fixed,

(H) $[[\neg\, (x) \leq (x)]]$

Special cases of the hypothesis and previous results:

0:   $\neg\, x \leq x$ from   H:x

1:   $x \leq x \;\lor\; \neg\, x - x = 0$ from $\underline{55}^{\leftarrow};x;x$

2:   $x - x = 0$ from $\underline{19};x$

Inferences:

3:   $\neg\, x - x = 0$ by

    0: $\neg\, x \leq x$

    1: $x \leq x \;\lor\; \neg\, x - x = 0$

4:   QEA by

    2: $x - x = 0$

    3: $\neg\, x - x = 0$