My Simplest theorem

Theorem Any natural number that has a divisor greater than itself equals zero.

Proof We observe for any natural $n, d, q$

\[ n = d \cdot q \land d > n \]

= \{ Leibniz \}
\[ n = d \cdot q \land d > d \cdot q \]

= \{ d > 0 \}
\[ n = d \cdot q \land 1 > q \]

= \{ q \text{ is natural} \}
\[ n = d \cdot q \land q = 0 \]

\[ n = 0 \]

(End of Proof)

At least twice - EWD1088 & EWD1170 - I had used that 0 is the only natural number with infinitely many divisors - e.g. $2^k$ for any $k$-, but I never took the trouble to prove it, and that probably explains why I missed the above.

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prof. dr. Edsger W. Dijkstra
Department of Computer Sciences
The University of Texas at Austin
Austin, TX 78712-1188
USA