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

$$
\begin{array}{ll}
 & n = d \cdot q \ \wedge \ d > n \\
= & \quad \{ \text{Leibniz} \} \\
 & n = d \cdot q \ \wedge \ d > d \cdot q \\
= & \quad \{ d > 0 \} \\
 & n = d \cdot q \ \wedge \ 1 > q \\
= & \quad \{ q \text{ is natural} \} \\
 & n = d \cdot q \ \wedge \ q = 0 \\
\Rightarrow & \quad \{ \text{Leibniz} \} \\
 & n = 0
\end{array}
$$

(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