This is a Theorem (The Isabelle Song)

(sung to the tune of "I don't like mondays", with apologies to Boomtown Rats)

The silicon chip inside her head
       gets switched to H-O-L
No pen and paper proofs today
       she's gonna make it rigorous
And now I don't understand it,
I always thought it was trivial
       but auto finds no proofs
       but there are some proofs
       what lemmas does she need to be shown?

Tell me why – this is a theorem
Tell me why – this is a theorem
Tell me why – this is a theorem
       I'm gonna prove uh uh uh uhh the first goal now

An inductive fact is here assumed
       so I type `induction x`
and two new goals I have to show
       and the simplifier solved just one
The next case ain't not obvious,
but it ain't so neat to just type `sorry`
       auto finds no proofs
       but there are some proofs
       what lemmas does she need oh oh oh oh

Tell me why – this is a theorem
Tell me why – this is a theorem
Tell me why – this is a theorem
       I'm gonna prove uh uh uh uhh the next goal now now now prove it all now

And sledgehammer stopped without a metis call
       And nitpick says its hopeless
So how could Gerwin show all the lemmas
       `by induction` and `by auto`
Trying `arbitrary`, 'cause Tobias told us
to better generalize
       but auto finds no proofs
       but there are some proofs
       what lemmas does she need to know know? oh oh oh

Tell me why – this is a theorem
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Tell me why – this is a theorem
I'm gonna prove uh uh uh uhh the last goal now

(Joachim Breitner, 2013)