The twin paradox is not a paradox by mathematical logic

We define the twin paradox without resort to stopping because we assume that instant velocity commences and terminates at an instant state of rest.

> Twins occupy the same fiducial point from which one twin obtains
> an instant velocity to a non-fiducial point, then obtains another instant velocity
> back to the fiducial point. The question is are the twins the same
> at the fiducial point before and after the separation and travel of the one twin. (0.0)

We test this in words as:

> If the fiducial point implies the twins are equivalent, then
> if a twin implies a velocity to a non-fiducial point,
> then if that same twin implies a reverse velocity to the fiducial point,
> then the fiducial point point implies the twins are equivalent. (1.1)

We assume the apparatus and method of Meth8/VŁ4: ~ Not; > Imply; = Equivalent to.

LET: pq twins; r the fiducial point; ~r not the fiducial point;
s velocity to a non-fiducial point; ~s velocity from a non-fiducial point.

> The designated *proof* value is `T` for tautology; `F` is the designated *contradiction* value.
> The 16-valued truth table is presented row-major and horizontally.

((r>(p=q))>(p>(s>~r))) > ((p>(~s>r))>(r>(p=q))) ; `TTTT TFFT TTTT TFFT` (1.2)

This describes the state of affairs *without* special relativity. Eq. 1.2 as rendered is *not* tautologous.

We test the counter example in words as:

> If the fiducial point implies the twins are equivalent, then
> if a twin implies a velocity to a non-fiducial point,
> then if that same twin implies a reverse velocity to the fiducial point,
> then the fiducial point point implies the twins are *not* equivalent. (2.1)

((r>(p=q))>(p>(s>~r))) > ((p>(~s>r))>(r>~(p=q))) ; `TTTT FTTF TTTT FTTT` (2.2)

The describes the state of affairs *with* special relativity. Eq. 2.2 as rendered is *not* tautologous.

The paradox is supposed to arise by numerical calculation of special relativity. This would mean that the respective states of affairs are both tautologous (or both contradictory) at the same time.

However Eqs. 2.1 and 2.2 are not both tautologous (or both contradictory), and *not* inversive.

This means the twin paradox is not a paradox, but rather something else, namely, a state of affairs that is *not* tautologous and *not* contradictory. What follows is that special relativity is suspicious.