Here is the calculation for the universal rate of acceleration of time:

If T is the universal rate of acceleration of time in seconds per second, then bodies must accelerate at Tc to remain at rest in time, but space is isotropic relative to time except for the slowing of time in gravitational wells, and thus bodies can accelerate into the slower time of the gravitational well to conserve rest in universally accelerating time (as described https://www.quora.com/How-does-space-being-curved-make-gravity-pull-us-down/answer/Kevin-Parcell-1).

So, if G=Tc. Then divide G by c to find T:

T = 2.22623346 × 10e-19 m2 kg-1 s-1

or

0.000,000,000,000,000,000,222,623,346

The *e-19* means the decimal has been moved 19 spaces after 0, which is one space beyond a millionth of a trillionth: a ten-quintillionth.

This is the rate of transformation of metrics/units. As change in the speed of time, it is the change in the duration of seconds per second (each second a tiny bit shorter each second, self-referentially, but perceived by observers as unchanging because of course the universal

acceleration of time also effects observers). The additional units attached to this value describe the corresponding changes to extension in space (m for meters distance) and mass (kg for kilograms), or, in other words, the transformations measured by clocks, rulers and balance scales. Applying this transformation number T to any given distance will predict the apparent change in extension of space because rulers/bodies transform, as meaningfully distinguished from space expanding, which we can apply to the total meters in a megaparsec (Mpc) to predict the change measured in kilometers of extension of a Mpc of space per second, which are the units used for the Hubble value (km/s/Mpc).

To make this calculation we convert megaparsecs to meters and multiply this number by rate of transformation T:

There are 3.086e+22 meters, or 30,860,000,000,000,000,000,000 meters in a megaparsec.

The result is

30,860,000,000,000,000,000,000 x
0.000,000,000,000,000,000,222,623,346 =

6870.15645756 meters

or T derived from G, as described in the answer, predicts a

transformation of metrics resulting in an apparent expansion of space of 6.87 km/s/Mpc.

The Hubble value, H, derived from precise measurements of cosmological redshift of frequency of light and estimating the distances to the sources of the light, is currently believed to be in the range of 67–72 km/s/Mpc.

To compare these two results by expressing them in possibly more imaginable numbers, we can draw an analogy to the difference in the number of human cells in one million persons, using the usual average of 3 trillion cells per person, which gives us 3 trillion million cells, or 3 quintillion cells:

3,000,000,000,000 x 1,000,000=
3,000,000,000,000,000,000, or 3.0e+18

And thus, the difference of these two values for T and H, as given in kilometers, is analogous to the difference between about 7 cells vs about 70 cells out of 3 quintillion cells (3 million trillion cells) in one million people, making the estimate of T from G one of the most precise estimates from first principles in the history of science, and the only model that accounts for the units that are attached to G to normalize it. Or, in other words, the prediction is successful and validates the theory rather than falsifying it.