Alternate Cooling Model verse Newton's Cooling
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It is customary to applying Newton's cooling as the standard model investigating the time-dependency of temperature of a hot substance exposed to a cool ambient. The rate of change of heat in Newton's model is simplistically related to linear-temperature difference of the two [1,2,3]. In our research flavored investigation we consider a fresh model, cooling that depends to the difference of temperature-squared conducive to similar results. Utilizing a Computer Algebra System (CAS), especially Mathematica [4,5] we show the equivalency of the two.

References

[1] https://www.math24.net/newtons-law-cooling.

[2] http://amsi.org.au/ESA-Senior-Years/SeniorTopic3/3e/3e-4history-3.html.

[3] https://byjus.com/jee/newtons-law-of-cooling.

[4] Stephen Wolfram, *Mathematica* "A general computer software system and language intended for mathematical and other applications",V12.0, Wolfram Research, 2019.

[5] http://Wolfram.com, (2020) Mathematica V12.1.1.