Math Bite: Proof of an Empirical Observation Made by Amos Oz's Character

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In Amos Oz's latest novel *Panther in the Basement* (Hebrew, Keter, Jerusalem, 1995), Proffie, the book's twelve-and-a-quarter-year-old precocious hero, makes the following observation regarding the ratio of his age to that of the age of his twenty-year-old neighbor, Yardena, on whom he has a crush (p. 127):

As the years will increase, the distance between me and her will decrease (in percentage), but the sad side is that this decreasing gap will decrease more and more slowly. Like a marathon-runner that got tired.

And indeed, the ratio of their ages, $f(t) = t/(7.75+t)$, is such that $f'(t) = (7.75)/(7.75+t)^2 > 0$, but $f''(t) = (-15.5)/(7.75+t)^3 < 0$. □

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