

8. [12 points] Below is a table of values for the function $t(y)$ which gives the number of tweets per day, in millions, on the social media website Twitter, y years after January 1, 2007. For this problem assume $t(y)$ is an increasing function.

year y	0	1	2	3	4
millions of tweets per day $t(y)$	0.005	0.3	2.5	35	50

- a. [4 points] Using the table, estimate the expression

$$365 \int_1^4 t(y) dy$$

using a left-hand Riemann sum. Please write all of the terms in the sum for full credit.

- b. [4 points] Give a practical interpretation of the expression $365 \int_1^4 t(y) dy$.

- c. [4 points] Suppose $T(y)$ is the total number of tweets, in millions, y years after January 1, 2007. If $T(3) = 9797$, estimate the total number of tweets between January 1, 2007 and January 1, 2011. Indicate what method you use to obtain your estimate and be sure to show your work.