7. [6 points] Let $g(t)$ be the concentration of caffeine (in milligrams per liter) in the bloodstream of a Math 116 GSI, t hours after calculus exam grading begins. Define

$$G(t) = \int_0^t g(x)dx,$$

and let $A(t) = \dfrac{1}{t}\, G(t)$.

a. [3 points] What is the practical interpretation of the statement $A(4) = 70$? Include units.

b. [3 points] Find $A'(t)$.