1. [12 points] The table below gives several values of a decreasing, differentiable function G.

x	-4	-3	-2	-1	0	1	2	3	4
$G(x)$	7	5	4	2	-2	-3	-6	-8	-9

a. [4 points] Use the midpoint rule with 3 subintervals to estimate $\displaystyle\int_{-4}^{2} \big(tG(t) + 4\big)\, dt$.

Carefully write out each of the terms involved in your estimate.
You do **not** have to simplify. However, no variables or function names should appear in your answer.

In parts **b** and **c** below, calculate the <u>exact</u> numerical value of the integral.
If it is not possible to do so, write "NOT POSSIBLE". *Show each step of your work clearly.*

b. [3 points] $\displaystyle\int_{-2}^{2} 6G'(2y)\, dy$

c. [5 points] $\displaystyle\int_{0}^{3} \frac{G'(x)\, G(x)}{(2G(x) - 3)(G(x) + 1)}\, dx$