1. [10 points] The table below gives several values of a function $f(x)$ and its derivative. Assume that both $f(x)$ and $f'(x)$ are defined and differentiable for all x.

x	0	1	2	3	4	5	6
$f(x)$	0	3	4	2	-1	-3	5
$f'(x)$	4	2	-1	-5	-2	7	9
$f''(x)$	-1	-3	-5	0	4	3	1

Compute each of the following. Do not give approximations. If it is not possible to find the value exactly, write NOT POSSIBLE

a. [2 points] Find $\displaystyle\int_0^4 f''(x)\,dx$.

Answer: $\displaystyle\int_0^4 f''(x)\,dx =$ _____

b. [2 points] Find $\displaystyle\int_2^5 (3f(x)+1)\,dx$.

Answer: $\displaystyle\int_2^5 (3f(x)+1)\,dx =$ _____

c. [3 points] Find the average value of $4f'(x)+x$ on the interval $[1,6]$.

Answer: _____

d. [3 points] Assuming that $f(x)$ is an odd function, find $\displaystyle\int_{-3}^3 f(x)\,dx$ and $\displaystyle\int_{-3}^3 f'(x)\,dx$.

Answer: $\displaystyle\int_{-3}^3 f(x)\,dx =$ _____ and $\displaystyle\int_{-3}^3 f'(x)\,dx =$ _____