1. [12 points] The table below gives several values of a differentiable function f such that f' is also differentiable and f'' is continuous.

x	-3	-2	-1	0	1	2	3
$f(x)$	14	20	4	11	24	5	8
$f'(x)$	3	-4	-6	2	5	-3	4

For each of the following, calculate the <u>exact</u> numerical value of the integral. If it is not possible to do so based on the information provided, write "NOT POSSIBLE" and clearly indicate <u>why</u> it is not possible. Show your work.

Note that no variables or function names (such as f, f', or f'') should appear in your answers.

a. [3 points] $\displaystyle\int_0^1 f'(2x)\,dx$

Answer: _____

b. [3 points] $\displaystyle\int_2^3 s f''(s)\,ds$

Answer: _____

c. [3 points] $\displaystyle\int_{-2}^{-1} q \cdot \left[\frac{d}{dq}\left(f'(q)e^{f(q)}\right)\right]dq$

Answer: _____

d. [3 points] $\displaystyle\int_{-1}^1 f'(y) \cdot f''(f(y))\,dy$

Answer: _____