

1. [16 points] Let $f(x)$ be a function that is **even** and **twice differentiable**. Some values of $f(x)$ and $f'(x)$ are given in the table below:

x	0	1	2	3	4
$f(x)$	-3	2	-1	0	5
$f'(x)$	0	4	$\sqrt{2}$	1	e

Use the table above to compute the **exact value** of the following integrals. If there is not enough information to determine the exact value of an integral, write “NEI.” You need to evaluate all integrals completely, and your answers should not involve the letter f , but you do not need to simplify your final answers. Show all your work.

a. [3 points] $\int_{-2}^2 f'(x) dx$

Answer: _____

b. [4 points] $\int_1^{e^2} \frac{f'(\ln(t))}{t} dt$

Answer: _____

c. [4 points] $\int_1^3 (2w + 1)f'(w) dw$

Answer: _____

d. [5 points] $\int_1^2 2x^3 f''(x^2) dx$

Answer: _____