**3.** [9 points]  Given below is a table of values for an **odd** function $g(x)$, its derivative $g'(x)$, and its second derivative $g''(x)$. The functions $g(x)$, $g'(x)$, and $g''(x)$ are all continuous and defined for all real numbers.

| $x$ | 0 | 4 | 7 | 9 |
|---|---|---|---|---|
| $g(x)$ | 0 | 3 | 2 | 7 |
| $g'(x)$ | 4 | $-1$ | 0 | $-3$ |
| $g''(x)$ | 0 | 6 | 3 | $-9$ |

Find the following values exactly, or write NEI if there is not enough information provided to do so. You do not need to show work, but limited partial credit may be awarded for work shown.

**a.** [2 points] $\displaystyle\lim_{r\to 0} \frac{g'(4+r)+1}{r}$

**Answer:**  = _____

**b.** [1 point] $g'(-4)$

**Answer:**  = _____

**c.** [2 points] $\displaystyle\int_0^7 \left(g'(x)+1\right)\ dx$

**Answer:**  = _____

**d.** [2 points] $\displaystyle\int_{-8}^8 g(x)\ dx$

**Answer:**  = _____

**e.** [2 points] the average value of $g''(x)$ on $[7,9]$

**Answer:**  = _____