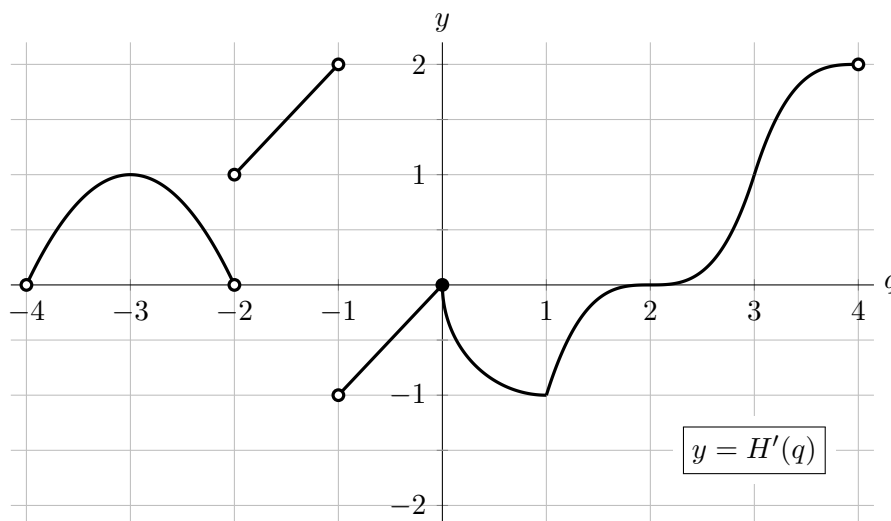


6. [11 points] Suppose $H(q)$ is a **continuous** function defined everywhere on the interval $(-4, 4)$. A graph of the **derivative** $H'(q)$ is given below.



- a. [2 points] Circle all intervals listed below on which $H(q)$ is **increasing**.

$(-4, -3)$ $(-3, -2)$ $(0, 1)$ $(1, 2)$ $(2, 3)$ NONE OF THESE

- b. [2 points] Circle all intervals listed below on which $H(q)$ is **concave down**.

$(-4, -3)$ $(-3, -2)$ $(0, 1)$ $(1, 2)$ $(2, 3)$ NONE OF THESE

- c. [2 points] Circle all intervals listed below on which $H''(q)$ is **decreasing**.

$(-4, -3)$ $(-3, -2)$ $(0, 1)$ $(1, 2)$ $(2, 3)$ NONE OF THESE

- d. [2 points] Circle all points listed below that are **inflection points** of $H(q)$.

$q = -3$ $q = -2$ $q = 0$ $q = 2$ $q = 3$ NONE OF THESE

- e. [1 point] Circle all points c below for which the limit $\lim_{q \rightarrow c} H(q)$ **does not exist**.

$c = -2$ $c = -1$ $c = 0$ $c = 1$ $c = 2$ NONE OF THESE

- f. [1 point] Circle all points c below for which the limit $\lim_{q \rightarrow c} H'(q)$ **does not exist**.

$c = -2$ $c = -1$ $c = 0$ $c = 1$ $c = 2$ NONE OF THESE

- g. [1 point] Circle all points c below for which the limit $\lim_{q \rightarrow c} H''(q)$ **does not exist**.

$c = -2$ $c = -1$ $c = 0$ $c = 1$ $c = 2$ NONE OF THESE