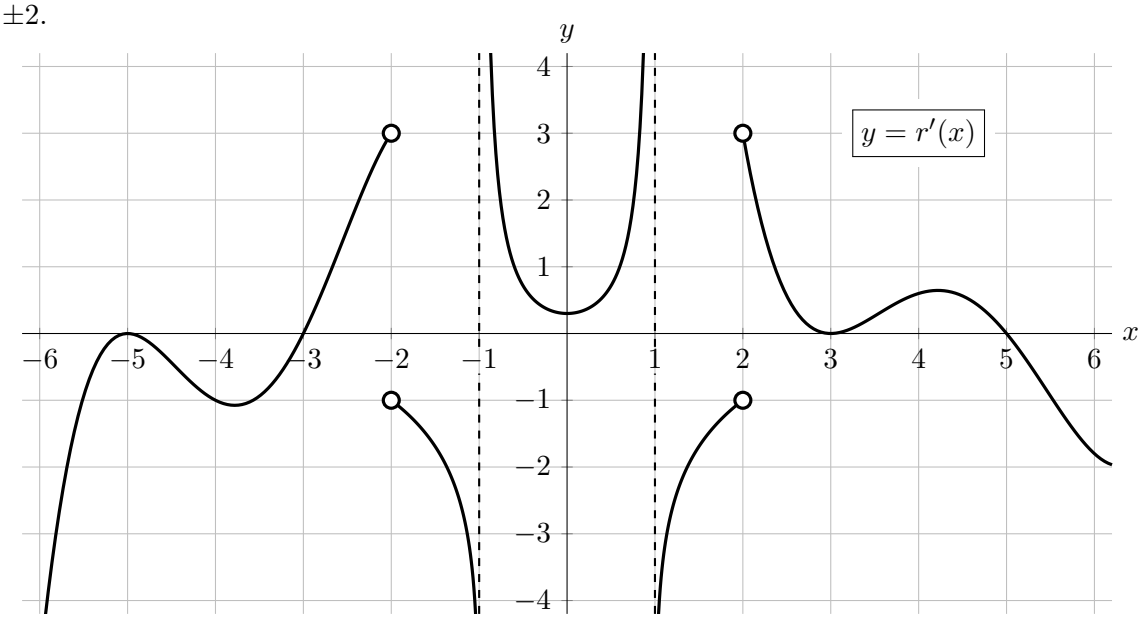
2. [10 points] Suppose $r(x)$ is a continuous function, defined for all real numbers. A portion of the graph of $r'(x)$, the **derivative** of $r(x)$, is given below. Assume $r'(x)$ is differentiable everywhere $r'(x)$ is defined. Note that $r'(x)$ has vertical asymptotes at $x = \pm 1$, and is undefined at $x = \pm 1$ and $x = \pm 2$.



a. [2 points] Circle all points below that are critical points of $r(x)$.

$x = 0$ $x = 1$ $x = 2$ $x = 3$ $x = 5$ NONE OF THESE

b. [2 points] Circle all intervals below on which $r(x)$ is increasing on the entire interval.

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

c. [2 points] Circle all intervals below on which $r(x)$ is concave up on the entire interval.

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

d. [2 points] Circle all intervals below in which $r(x)$ has a local minimum.

$(-4, -2)$ $(0, 2)$ $(1, 3)$ $(2, 4)$ $(4, 6)$ NONE OF THESE

e. [2 points] Circle all intervals below in which $r(x)$ has a local maximum.

$(-4, -2)$ $(0, 2)$ $(1, 3)$ $(2, 4)$ $(4, 6)$ NONE OF THESE