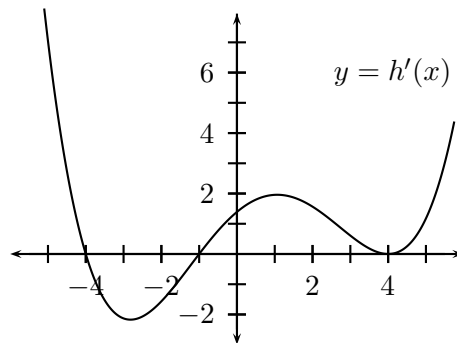


1. [13 points] The graph of the **derivative**, $h'(x)$, of a continuous function h is shown below:



- a. [3 points] Approximate the x -coordinates of all critical points of h in the interval $(-5, 5)$, and classify each as either a local maximum, a local minimum, or neither.
- b. [3 points] Approximate the x -coordinate(s) of any inflection point(s) of h in the interval $(-5, 5)$.
- c. [2 points] Approximate the value(s) of x on the interval $[-5, 5]$ where h attains its global maximum.
- d. [2 points] Approximate the value(s) of x on the interval $[-5, 5]$ where h attains its global minimum.
- e. [3 points] If $h(1) = 3$, find the best linear approximation to $h(x)$ at the point $x = 1$. Is this linear approximation an underestimate or an overestimate of h for points near $x = 1$? Explain.