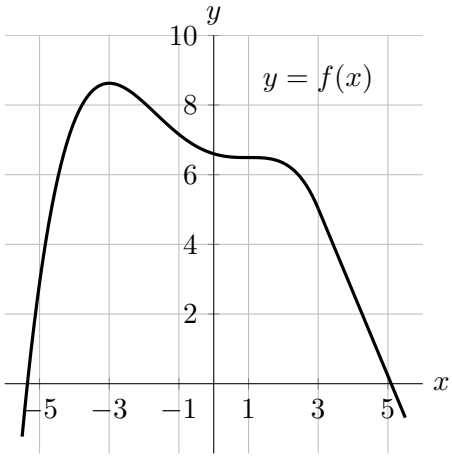
5. [7 points] A portion of the graph of the function $f(x)$ is shown below. Note that $f(x)$ is linear for $x > 3$.



a. [4 points] Let the quantities I–V be defined as follows:

I. The number 0.

II. $\dfrac{f(-5) - f(2)}{-5 - 2}$.

III. $f'(-5)$.

IV. The slope of the secant line between the points on the graph at $x = -3$ and $x = 5$.

V. The slope of the tangent line at $x = 4$.

Rank the quantities in order from least to greatest by filling in the blanks below with the options I–V. *You do not need to show your work.*

_____ < _____ < _____ < _____ < _____

b. [3 points] There are four graphs below. Circle the <u>one</u> graph that could be the graph of the <u>derivative</u> of $f(x)$. *Note that the graphs are not all drawn at the same scale.*