9. [7 points] Let $g(x)$ be a function that is twice-differentiable for all $x$. Additionally, $g(x)$ has the following properties:

- $g(x)$ has no inflection points on the interval $(0, 10)$
- $g'(x)$ does not change signs on the interval $(0, 10)$
- $g'(5) = 1$
- $g''(7) = -2$

Define the function $G(x)$ to be

$$G(x) = \int_1^x g(t) \, dt.$$ 

a. [2 points] Is $G(x)$ concave up, concave down, or neither at $x = 9$? No justification is required.

Circle one:  CONCAVE UP  CONCAVE DOWN  NEITHER

b. [5 points] With the blanks provided, order from least-to-greatest

$$G(9), \text{ LEFT}(9), \text{ RIGHT}(9), \text{ MID}(9), \text{ TRAP}(9)$$

where all the approximations above are of the definite integral $G(9)$. No justification is required.

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\text{_____} \leq \text{_____} \leq \text{_____} \leq \text{_____} \leq \text{_____}
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