Name: _____ Mark: _____

**Mini-math Div 3/4: Friday, February 4, 2022 (10 minutes)**

1. (1 point) Suppose $\int_{-2}^{5}(2f(x)+3)\,dx = 15$, and $\int_{3}^{5} f(x)\,dx = 10$. What is $\int_{-2}^{3} f(x)\,dx$?

   A. $-13$ B. $-4$ C. $5$ D. $7$

2. (1 point) Evaluate $\int_{1}^{4} \frac{x+4}{\sqrt{x}}\,dx$.

   A. $-\frac{9}{4}$ B. $7$ C. $11$ D. $\frac{38}{3}$

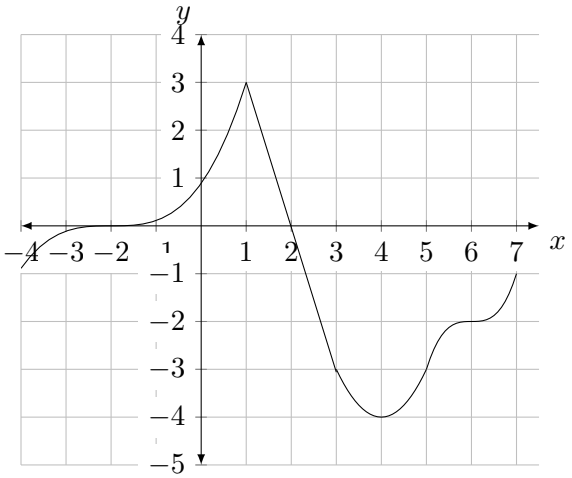
3. (1 point) Evaluate $\int_{1}^{3} \frac{x+1}{x^2+2x-1}\,dx$.

   A. $\frac{\ln 7}{2}$ B. $\frac{\ln 14 + \ln 2}{2}$ C. $\ln 14 - \ln 2$ D. $\ln 3$

4. (1 point) Suppose $\int_1^5 f'(x)\,dx = 12$ and $f(5) = 3$. What is $f(1)$?

A. $-15$ B. $-9$ C. 9 D. 15

5. (1 point) (AP) The graph of $f$ is below. Let $g(x) = \int_1^x f(t)\,dt$. At what value(s) of $x$ in the interval $[-4, 7]$ does $g$ have a point of inflection?




A. exactly one of $-2$ and 2

B. both $-2$ and 2

C. both 1 and 4

D. all of $-2, 5$ and 6