Name: _____ Mark: _____

Mini-math AP Calculus BC: Friday, February 4, 2022 (8 minutes)

1. (2 points) The continuous functions f and g and their derivatives take on the following values:

x	-2	-1	0	1	2
$f(x)$	-6	-1	3	-2	2
$f'(x)$	5	-2	4	-3	6
$g(x)$	3	-4	-2	5	4
$g'(x)$	-2	2	5	-4	3

If $\displaystyle\int_{-2}^{1} f'(x)g(x)\,dx = 7$, then what is $\displaystyle\int_{-2}^{1} f(x)g'(x)\,dx$?

2. (2 points) Find $\displaystyle\int \frac{x^2+2x}{x^2+2x+2}\,dx$

3. (2 points) Find $\int \frac{x^3+1}{x^2-1}\,dx$

4. (2 points) Find $\int_{-1}^{2} \frac{1}{x^2}\,dx$