Math 2260 Quiz 10

Name _____

Points will be deducted for untidy or disorganized answers

1. (1 point) Write down the form of the partial fraction decomposition for the rational function

$$\frac{x^2 - 2x + 1}{(x-1)^3(x^2+1)(2x^2 - x + 2)^2}$$

Do not determine the numerical values of the coefficients.

2. (2 point) Evaluate

$$\int \frac{1}{x^2 - x - 2}\, dx$$

3. (2 points) Use the fact that

$$\frac{x^3 + 2}{x^2 + 1} = x - \frac{x - 2}{x^2 + 1}$$

to evaluate

$$\int \frac{x^3 + 2}{x^2 + 1}\, dx$$