

B1.

MATH 1700: Test #5**Name** _____**Student Number** _____

1. Write the general form (in terms of unknown coefficients) of the partial fractions expansion of each of the following expressions. DO NOT SOLVE FOR THE COEFFICIENTS.

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

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

2. Evaluate $\int_1^{\infty} \frac{2}{1+x^2} dx$ or show it diverges.

3. Set up the integral for the arc length of the curve $y = 3 \ln x$ from $x = 2$ to $x = 5$. DO NOT EVALUATE the integral.