

Name _____

The two integrals on this quiz must be computed by hand with sufficient work shown.

1. (4 points) Evaluate $\int \frac{5x^2 + 10x - 5}{(x + 2)(x^2 + 1)} dx$.

2. (4 points) Evaluate $\int \frac{3x + 7}{x^2 + 4x + 3} dx$.

3. (2 points) Using the constants A, B, C, D, \dots , show the form of the partial fraction decomposition for the following rational function. Do not solve for the constants and do not evaluate an integral.

$$\frac{2x + 5}{(x + 2)(x - 1)^3(x^2 + 1)^2} =$$