Calculus II
MATH 1920
Spring 2025

Partial Fractions

Due Monday, March 17

University of Memphis
Mathematical Sciences
Dwiggins

Give the partial fraction decomposition for each of the following rational expressions.
After finding the partial fractions, give the antiderivative in its simplest form.

1. $\dfrac{x-9}{x^2-3x-18}$

2. $\dfrac{x^2-3}{x^3-3x^2-4x}$

3. $\dfrac{8}{x^2+4x-12}$

4. $\dfrac{2x}{x^2-9}$

5. $\dfrac{x}{(x-6)(x+2)^2}$

6. $\dfrac{2}{x^3(x+1)}$

7. $\dfrac{2}{x(x^2+1)}$

8. $\dfrac{2}{x^2(x^2+1)^2}$

9. $\dfrac{x^2+1}{x^3+9x}$

10. $\dfrac{x^2}{(x-1)(x^2+4x+5)}$