

6.12 Linear Partial Fractions

Calculus

Name: _____

CA #2

Evaluate using partial fractions.

1. $\int \frac{1}{x^2-49} dx$

2. $\int \frac{2x}{(2x-1)(x+2)} dx$

3. $\int \frac{5}{x(x+5)} dx$

4. $\int_0^3 \frac{x-1}{(x-2)(x+1)} dx$

$$5. \int \frac{1}{(x+1)(1-2x)} dx$$

$$6. \int \frac{2}{(x-1)(x+2)(x-4)} dx$$

Answers to 6.12 CA #2

1. $\frac{1}{14} \ln \left \frac{x-7}{x+7} \right + C$	2. $\frac{1}{5} \ln 2x - 1 + \frac{4}{5} \ln x + 2 + C$	3. $\ln \left \frac{x}{x+5} \right + C$
4. $\frac{1}{3} \ln 8$ or $\ln 2$	5. $\frac{1}{3} \ln \left \frac{x+1}{1-2x} \right + C$	6. $-\frac{2}{9} \ln x - 1 + \frac{1}{9} \ln x + 2 + \frac{1}{9} \ln x - 4 + C$