

Math Sheet

Name _____ Score _____ Teacher _____ Date _____

Partial Fraction Integration

Decompose each proper rational function, integrate each term, and preserve absolute values on linear logarithms. Definite intervals never cross a pole.

1. Evaluate the indefinite integral of $(1x+0)/(x-2)^2 dx$. A valid decomposition is $1/(x-2) + 2/(x-2)^2$.

2. Evaluate the definite integral from 0 to 1 of $((6)x-39)/((x-4)(x-7)) dx$.

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Decompose each proper rational function, integrate each term, and preserve absolute values on linear logarithms. Definite intervals never cross a pole.

3. Evaluate the indefinite integral of $(7x^2-4x+40)/((x-2)(x^2+16))$ dx. A valid decomposition is $3/(x-2) + (4x+4)/(x^2+16)$.

4. Evaluate the definite integral from 0 to 1 of $(4x^2-8x+9)/((x-4)(x^2+25))$ dx.

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Decompose each proper rational function, integrate each term, and preserve absolute values on linear logarithms. Definite intervals never cross a pole.

5. Evaluate the indefinite integral of $(5x-16)/(x-4)^2 dx$. A valid decomposition is $5/(x-4) + 4/(x-4)^2$.

6. Evaluate the definite integral from 0 to 1 of $((6)x-23)/((x-3)(x-8)) dx$.
