
1. (1 pt) Evaluate the integral.

$$\int \frac{1}{(x-1)(x+3)} dx$$

on an interval on which $x > 1$.

2. (1 pt) Evaluate the indefinite integral.

$$\int \frac{9}{x^2 - 10x + 25} dx$$

3. (1 pt) The form of the partial fraction decomposition of a rational function is given below.

$$\frac{3x^2 - 43x - 41}{(x-7)(x^2+16)} = \frac{A}{x-7} + \frac{Bx+C}{x^2+16}$$

$A = \underline{\hspace{1cm}}$ $B = \underline{\hspace{1cm}}$ $C = \underline{\hspace{1cm}}$

Now evaluate the indefinite integral.

$$\int \frac{3x^2 - 43x - 41}{(x-7)(x^2+16)} dx$$

4. (1 pt) Evaluate the integral.

$$\int_0^3 \frac{1}{x^2 + 1x + 12.5} dx$$

5. (1 pt) Evaluate the indefinite integral

$$\int \frac{x^3 - 8}{x^2 + 5x + 4} dx$$

6. (1 pt) Evaluate the integral.

$$\int \frac{-32e^x - 42}{e^{2x} + 7e^x + 6} dx$$
