

## Calculus 2

### *Integration with Logarithmic Functions*

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Integrate the following.

1.  $\int \frac{5}{x} dx$

2.  $\int \frac{3}{x} dx$

3.  $\int \frac{2}{x-5} dx$

4.  $\int \frac{4}{x-5} dx$

5.  $\int \frac{1}{3x+5} dx$

6.  $\int \frac{1}{2x+5} dx$

7.  $\int \frac{1}{3-x} dx$

8.  $\int \frac{1}{5-x} dx$

9.  $\int \frac{4}{3+5x} dx$

10.  $\int \frac{5}{3+2x} dx$

11.  $\int_1^2 \frac{x^2+2x+4}{x} dx$

12.  $\int_1^3 \frac{x^2+5x+7}{x} dx$

13.  $\int_e^5 \frac{1}{x \ln(x)} dx$

14.  $\int_e^6 \frac{1}{x \ln(x)} dx$

15.  $\int_1^4 \left(x + \frac{1}{\sqrt{x}}\right)^2 dx$

16.  $\int_1^9 \left(x + \frac{1}{\sqrt{x}}\right)^2 dx$

17.  $\int_1^e \frac{e^x}{e^x+5} dx$

18.  $\int_e^5 \frac{e^x}{e^x+7} dx$

19.  $\int 2^x dx$

20.  $\int 10^x dx$

21.  $\int x 10^{x^2} dx$

22.  $\int x^2 10^{x^3} dx$

23.  $\int \frac{(\ln(x))^2}{x} dx$

24.  $\int \frac{(\ln(x))^3}{x} dx$