

1. Evaluate the integral.

$$\int \frac{x + 25}{(x + 10)(x - 5)} dx$$

2. Evaluate the integral.

$$\int_{\frac{\pi}{4}}^{\frac{3\pi}{2}} \sin^5 4x \cos^3 4x dx$$

Please round the answers to the nearest hundredth.

3. Evaluate the integral.

$$\int_4^5 e^{\sqrt{t}} dt$$

Round your answer to the nearest hundredth.

4. Evaluate the integral.

$$\int_0^{10} (x^2 + 1)e^{-x} dx$$

5. Evaluate the indefinite integral:

$$\int 4x(x^2 + 4)^4 dx$$

6. Evaluate the indefinite integral:

$$\int \cos^5 x \sin x dx$$

7. Evaluate the definite integral:

$$\int_0^{\pi/3} \sin 3t dt$$

Enter your answer as a fraction.

8. Evaluate the integral.

$$\int e^{2x} \cos(7x) dx$$

9. Evaluate the definite integral:

$$\int_3^6 \frac{dx}{2x + 8}$$

If entering your answer as a decimal, round to 4 decimal places.

10. Find the general indefinite integral.

$$\int (8 - t)(3 + t^2) dt$$

11. Evaluate the integral. $\int_0^{\frac{\pi}{4}} \frac{4 + \cos^2 \theta}{\cos^2 \theta} d\theta$

12. Evaluate the indefinite integral.

$$\int x \cos(13x) dx$$

13. Evaluate the integral $\int_0^1 \sqrt{x} dx$. If entering a decimal, round to three decimal places.

14. Find the general indefinite integral.

$$\int x(8 + 10x^5) dx$$

15. Evaluate the indefinite integral:

$$\int \frac{e^x}{e^x + 2} dx$$

16. Evaluate the integral.

$$\int_0^{\frac{\pi}{20}} \cos^5 10x dx$$

If entering a decimal, round to 3 decimal places.

17. Evaluate the integral.

$$\int_1^{49} \sqrt{t} \ln t dt$$

If entering a decimal, round to four decimal places.

18. Evaluate the integral.

$$\int x^2 \cos(11x) dx$$

19. Evaluate the integral. $\int_{-3}^4 |3x - x^2| dx$

If entering a decimal, round to three decimal places.

20. Evaluate the indefinite integral:

$$\int \frac{2 + 4x}{\sqrt{4 + 2x + 2x^2}} dx$$

ANSWER KEY

Name: _____

Class: _____

Date: _____

1. $-\ln(|x+10|)+2\ln(|x-5|)+C$
2. 0
3. 8.35
4. $-123e^{-10}+3$
5. $\frac{2}{5} \cdot (x^2+4)^5 + C$
6. $\frac{-1}{6} \cdot \cos^6(x)+C$
7. $\frac{2}{3}$
8. $\frac{(e^{2x} \cdot (2\cos(7x)+7\sin(7x)))}{53} + C$
9. $\frac{1}{2} \cdot \ln\left(\frac{10}{7}\right)$
10. $24t - \frac{3t^2}{2} + \frac{8t^3}{3} - \frac{t^4}{4} + C$
11. $4 + \frac{\pi}{4}$
12. $\frac{1}{169} \cdot \cos(13x) + \frac{x}{13} \cdot \sin(13x) + C$
13. 0.666667
14. $\frac{8x^2}{2} + \frac{10x^7}{7} + C$
15. $\ln(e^x+2)+C$
16. $\frac{8}{(10 \cdot 15)}$
17. $\frac{686\ln(49)}{3} - \frac{1368}{9}$
18. $\frac{2x \cdot \cos(11x)}{121} + \frac{(121x^2-2)}{1331} \cdot \sin(11x) + C$
19. 28.833333
20. $2\sqrt{4+2x+2x^2} + C$