Cho Kit CHAN

Assignment WW5_202122T1 due 11/13/2021 at 11:00pm HKT

Find the function f(x) such that $f'(x) = 15x^2 + 8e^{2x}$ and f(0) = 4.

Answer: f(x) =

2. (1 point)

Evaluate the indefinite integral

$$\int \frac{2x+9}{\sqrt{x+1}} dx$$

Answer: ______+ *C*

3. (1 point)

Evaluate the indefinite integral

$$\int \frac{\ln x}{x\sqrt{2 + \ln x}} \, dx$$

Answer: ______+ *C*

Click for a hint

4. (1 point)

Evaluate the indefinite integral

$$\int e^{5x} \cos(e^{5x}) dx$$

Answer: ______ + *C*

5. (1 point) Evaluate the indefinite integral.

$$\int \frac{\cos(3x)}{1+\sin^2(3x)} dx$$

Answer: +C

6. (1 point)

Evaluate the indefinite integral

$$\int \frac{\ln(x^9)}{x} \, dx$$

Answer: ______+ *C*

7. (1 point)

$$\int \frac{2xdx}{(x^2+5)\ln(x^2+5)}$$

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=____+C

Click for a hint

8. (1 point)

Evaluate the indefinite integral

$$\int \sin^3(4x)\cos^2(4x)\,dx$$

Answer: $_$ + C

9. (1 point)

Evaluate the indefinite integral

$$\int \sin^2(2x)\cos^4(2x)\,dx$$

Answer: ______ + *C*

10. (1 point)

Evaluate the indefinite integral.

$$\int \frac{54}{\sqrt{45 - 108x - 81x^2}} dx$$

____+(

11. (1 point)

Evaluate

$$\int \frac{15 \, dx}{x^2 \sqrt{x^2 + 36}}$$

 $Answer = \underline{\hspace{1cm}} + C$

12. (1 point)

Calculate the integral:

$$\int \frac{1}{x^2 + 13x + 42} \, dx = \frac{1}{x^2 + 13x + 42} \, dx$$

13. (1 point)

Evaluate the integral:

$$\int \frac{x^2}{x^2 + 9} dx = \underline{\qquad} + C$$

1

14. (1 point)

Evaluate the indefinite integral

$$\int \frac{4x+7}{x^2+8x+17} \, dx$$

15. (1 point)

Evaluate the indefinite integral

$$\int \frac{4x+3}{4x^2+8x+9} \, dx$$

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