1. (1 point)
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)

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

$=$ _____ $+C$

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.

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

_____ $+C$

11. (1 point)
Evaluate

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

Answer = _____ $+C$

12. (1 point)
Calculate the integral:
$\int \frac{1}{x^2+13x+42}\,dx =$ _____ $+C$

13. (1 point)
Evaluate the integral :
$\int \frac{x^2}{x^2+9}dx =$ _____ $+C$

14. (1 point)
Evaluate the indefinite integral

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

Answer: _____ $+ C$

15. (1 point)
Evaluate the indefinite integral

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

Answer: _____ $+ C$