

WebWork

1. Solve the equation: $3x + 2 = 8$.
2. Differentiate the function $f(x) = 4x^3 - 2x + 1$.
3. Evaluate the definite integral: $\int (2x + 3) dx$ from 0 to 5.
4. Find the limit of the function $f(x) = (x^2 - 4)/(x - 2)$ as x approaches 2.
5. Determine the inverse function of $f(x) = 3x - 1$.
6. Simplify the expression: $(2x^2 + 3x - 1) + (4x^2 - 2x + 5)$.
7. Solve the system of equations: $2x + y = 5$ and $3x - 2y = 4$.
8. Find the domain of the function $f(x) = \sqrt{4 - x^2}$.
9. Factor the quadratic expression: $x^2 + 5x + 6$.
10. Determine the slope of the line passing through the points (2, 5) and (4, 9).
11. Solve the trigonometric equation: $\sin(x) = \frac{1}{2}$.
12. Evaluate the logarithm: $\log(\text{base } 2) 8$.
13. Determine the radius of a circle given its circumference of 20π .
14. Find the derivative of the function $f(x) = e^x + \ln(x)$.
15. Simplify the complex number expression: $(3 + 2i)(4 - i)$.
16. Solve the exponential equation: $2^x = 16$.
17. Determine the area of a triangle with base 5 units and height 8 units.

18. Find the antiderivative of the function $f(x) = 3x^2 + 2x + 1$.

19. Determine the matrix product: $\begin{bmatrix} 1 & 2 \end{bmatrix} * \begin{bmatrix} 3 & 4 \end{bmatrix}$.

20. Solve the trigonometric equation: $\cos(x) = -1/2$.

21. Evaluate the definite integral: $\int (2\sin(x) + 3\cos(x)) dx$ from 0 to π .

22. Simplify the complex fraction: $(3x + 2)/(x - 1)$.

