

Mathematics Test Assignment - Equation Rendering Demo

Total Points: 100 | Questions: 5 | Date: November 17, 2025

Instructions

This assignment demonstrates professional equation rendering in PDF documents. All equations should appear with research paper quality formatting. Please solve the following problems showing all work clearly.

Important: Show all work for full credit. Write legibly and organize your answers clearly.

Question 1

25 points

Medium

Long
Answer

Solve the quadratic equation:

$$x^2 + 5x + 6 = 0$$

Use the quadratic formula:

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Where

$$a = 1$$

$$b = 5$$

and

$$c = 6$$

Answer:

Question 2

20 points

Medium

Long
Answer

Calculate the definite integral:

$$\int_0^{\pi} \sin(x) dx$$

Show all steps in your calculation.

Answer:

Question 3

15 points

Easy

Short
Answer

Find the limit:

$$\lim_{x \rightarrow 0} \frac{\sin(x)}{x}$$

You may use L'Hôpital's rule or the standard limit identity.

Answer:

Question 4

25 points

Hard

Long
Answer

Given the system of linear equations:

$$2x + y = 5$$

$$x + 3y = 7$$

Find the values of x

 x

and

y

Answer:

Question 5

15 points

Easy

Multiple
Choice

What is the value of

$$e^{i\pi} + 1$$

?

A.

0

B.

1

C.

$$-1$$

D.

$$\dot{i}$$

Generated by Vidya AI Assignment System