Assignment 9

Due Date: [Date]

Name: [Student Name]

Question 1:

Calculate the following expression: 2 + 3 × 4

Answer: 14

Question 2:

Solve the equation: 2x + 3 = 7

Answer: x = 2

Question 3:

Find the area of a rectangle with length 5 cm and width 3 cm.

Answer: 15 square cm

Question 4:

List the first five terms of the arithmetic sequence with first term 2 and common difference 3.

Answer: 2, 5, 8, 11, 14

Question 5:

Determine the slope of the line passing through the points (1, 2) and (3, 4).

Answer: 1

Question 6:

Simplify the expression: (x^2 + 3x + 2) / (x + 2)

Answer: x + 1

Question 7:

Solve the quadratic equation: x^2 - 5x + 6 = 0

Answer: x = 2, 3

Question 8:

Graph the function f(x) = x^3 - 2x + 1

Answer: [Graph of f(x) = x^3 - 2x + 1]

Question 9:

Find the limit of the function f(x) = (x^2 - 4) / (x - 2) as x approaches 2.

Answer: 4

Question 10:

Convert the following angle from degrees to radians: 180°

Answer: π radians

Question 11:

Calculate the derivative of the function f(x) = 3x^2 + 2x - 1

Answer: f'(x) = 6x + 2

Question 12:

Solve the system of equations:

2x + 3y = 5
3x - 2y = 4

Answer: x = 2, y = 1

Question 13:

Find the integral of the function f(x) = 2x + 1 from x = 1 to x = 3.

Answer: 8

Question 14:

Evaluate the definite integral of f(x) = x^2 from x = 0 to x = 2.

Answer: 8/3

Question 15:

Write a short essay on the importance of mathematics in everyday life.

Answer: [Essay on the importance of mathematics in everyday life]

Question 16:

Discuss the role of geometry in architecture.

Answer: [Discussion on the role of geometry in architecture]

Question 17:

Explain the concept of probability and its applications.

Answer: [Explanation of probability and its applications]

Question 18:

Describe the significance of calculus in understanding motion.

Answer: [Description of the significance of calculus in understanding motion]

Question 19:

Present a case study on how mathematics was used in a real-world problem.

Answer: [Case study on the use of mathematics in a real-world problem]

Question 20:

Discuss the impact of technology on mathematics education.

Answer: [Discussion on the impact of technology on mathematics education]