

Acadia University
Department of Mathematics and Statistics

Topics from Advanced Calculus
(MATH 2023)

Assignment 3
Due March 18th 2002

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Note: Problems are taken from Schaum's outline on Differential Equations (Second Edition) by Richard Bronson. Each student must hand in his own paper, but team work is allowed. You have to give complete solutions. The purpose of this assignment is to give you some practical experience in solving basic differential equations. Please make sure you know what you are doing since we will rely heavily on this experience later in solving more difficult problems.

WARNING: DO NOT WAIT UNTIL THE LAST MINUTE TO DO THIS ASSIGNMENT!!! THIS IS NOT AN EASY OR SHORT ASSIGNMENT! (EVEN THOUGH MANY OF THESE QUESTIONS ARE VERY SHORT.) START EARLY AND COME ASK QUESTIONS AS USUAL!

1 Basic Concepts

Do problems 1.14, 1.15, 1.16, 1.17, 1.24, 1.28.

2 Classification of First-Order Differential Equations

Do problems 2.15, 2.25, 2.29, 2.34, 2.35.

3 Separable First-Order Differential Equations

Do problems 3.30, 3.37, 3.39, 3.42, 3.49, 3.52, 3.53, 3.54.

4 Exact First-Order Differential Equations

Do problems 4.24, 4.32, 4.33, 4.36, 4.37, 4.38, 4.45, 4.47, 4.51, 4.65.

5 Linear First-Order Differential Equations

Do problems 5.22, 5.33, 5.51.