Math 17B Homework Assignments.

All problems are from the **1st edition of *Biocalculus: Calculus, Probability, and Statistics for the Life Sciences* by James Stewart and Troy Day**.
See the class **Syllabus** for instructions.

HOMEWORK 1

Lecture 1:
Section 4.6 (Antiderivatives)
Problems 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45

Section 5.1 (Areas and Distances)
Problems 1, 3, 5, 9, 13

Lectures 2 and 3:
Section 5.2 (The Definite Integral)
Problems 1, 3, 5, 9, 11, 15, 17, 19, 21, 25, 27, 29, 37, 39

SUBMIT TO GRADESCOPE BY 10:00PM ON WEDNESDAY, JANUARY 18:
Section 4.6 Problem 41 and Section 5.2 Problem 27

HOMEWORK 2

Lecture 4:
Section 5.3 (The Fundamental Theorem of Calculus)
Problems 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 35, 37, 39, 41, 43, 45, 47, 49, 51, 53, 55, 65, 69, 71

Lecture 5:
Section 5.4 (The Substitution Rule)
Problems 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 37, 39, 43, 57, 61

SUBMIT TO GRADESCOPE BY 10:00PM ON MONDAY, JANUARY 23:
Section 5.3 Problems 35 and 53

HOMEWORK 3

Lecture 6:
Section 5.5 (Integration by Parts)
Problems 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 29, 33

Lecture 7:
Section 5.6 (Partial Fractions)
Problems 1, 3, 5, 7, 9, 11, 15, 17, 19, 21

Lecture 8:
Section 5.8 (Improper Integrals)
Problems 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 31

SUBMIT TO GRADESCOPE BY 10:00PM ON MONDAY, JANUARY 30:
Section 5.5 Problem 33 and Section 5.8 Problem 27

HOMEWORK 4

Lecture 9:
Section 6.1 (Area Between Curves)
Problems 1, 3, 5, 7, 9, 13, 15, 21, 25

Section 6.2 (Average Values)
Problems 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21

Lecture 10:
Section 6.3 (Further Applications to Biology)
Problems 1, 3, 5, 7, 9, 11, 13

Lecture 11:
Section 6.4 (Volumes)
Problems 1, 3, 5, 7, 11

SUBMIT TO GRADESCOPE BY 10:00PM ON MONDAY, FEBRUARY 6:
Section 6.1 Problem 13 and Section 6.2 Problem 15

HOMEWORK 5

Lecture 12:
Section 7.1 (Modeling with Differential Equations)
Problems 1, 3, 5, 7, 9, 11, 13, 15

Lecture 13:
Section 7.2 (Phase Plots, Equilibria, and Stability)
Problems 1, 3, 5, 7, 9, 11, 13, 15

SUBMIT TO GRADESCOPE BY 10:00PM ON MONDAY, FEBRUARY 13:
Section 7.1 Problem 13 and Section 7.2 Problem 11

HOMEWORK 6

Lecture 14:
Section 7.4 (Separable Differential Equations)
Problems 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 33, 35, 37, 39, 41, 43

Lectures 15 and 16:
Section 7.3 (Direction fields and Euler's Method)
Problems 1, 3, 5, 7, 9, 11, 13, 19, 21, 23

Section 7.5 (Systems of Differential Equations)
Problems 1, 3, 5, 7, 9, 11, 13, 15, 21

SUBMIT TO GRADESCOPE BY 10:00PM ON WEDNESDAY, FEBRUARY 22:
Section 7.4 Problem 17 and Section 7.5 Problem 21

HOMEWORK 7

Lecture 17:
Section 8.1 (Coordinate Systems)
Problems 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 37

Section 8.2 (Vectors)
Problems 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 31, 33, 35, 39, 41

Lecture 18:
Section 8.3 (The Dot Product)
Problems 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 27, 29, 31

SUBMIT TO GRADESCOPE BY 10:00PM ON MONDAY, FEBRUARY 27:
Section 8.1 Problem 37 and Section 8.3 Problem 1

HOMEWORK 8

Lecture 19:
Section 8.4 (Matrix Algebra)
Problems 1, 3, 5, 7, 9

Lecture 20:
Section 8.5 (Matrices and the Dynamics of Vectors)
Problems 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21

Lecture 21:
Section 8.6 (The Inverse and Determinant of a Matrix)
Problems 1, 3, 11, 13, 15, 17, 19, 23, 25, 27, 29, 31, 33, 35

SUBMIT TO GRADESCOPE BY 10:00PM ON MONDAY, MARCH 6:
Section 8.4 Problem 3 and Section 8.6 Problem 13

HOMEWORK 9

Lectures 22 and 23:
Section 8.7 (Eigenvectors and Eigenvalues)
Problems 1, 3, 7, 9, 11, 13, 15, 17, 21, 23, 25, 27, 29, 31

SUBMIT TO GRADESCOPE BY 10:00PM ON MONDAY, MARCH 13:
Section 8.7 Problems 9 and 29

HOMEWORK 10

Lecture 24:
Section 8.8 (Iterated Matrix Models)
Problems 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 35, 37, 39, 41

NO PROBLEMS TO SUBMIT FOR THIS HOMEWORK!