

Calculus 120, Chapter 2 Summary ~ things you should know

notes by Tim Pilachowski

Important concepts:

increasing and decreasing functions, relative and absolute maxima and minima, points of inflection

y -intercepts and x -intercepts

values for which a function is undefined, vertical and horizontal asymptotes

optimization as finding a maximum or minimum

marginal cost, marginal revenue and marginal profit

Be able to:

use the first derivative to determine where a function is increasing and decreasing.

use the first and second derivatives to determine where a function has maxima, minima and points of inflection.

find the coordinates of y - and x -intercepts.

state the domain of a function.

find the equations of any asymptotes of a function.

use all of the above to accurately sketch the graph of a function.

interpret and answer questions in an application using a given formula, including but not limited to height functions.

derive and use formulas in applications involving basic geometry, including but not limited to maximum area and minimum cost questions.

derive and use formulas in applications involving price, cost, revenue and profit.

Review exercises from the text (13th edition):

Chapter 2 Review of Fundamental Concepts, 1 – 16

Chapter 2 Supplementary Exercises, 1 – 61 (answers to odd-numbered problems are in the back)