1. Introduction

Here we discuss the goals of “mathematical modeling” (see the first paragraph of the preface of the textbook) and then next discuss the 5 step method.

2. Original formulation of the problem

A manufacturer of personal computers currently sell 10,000 units per month of a basic model. The cost of manufacture is $700/unit, and the wholesale price is $900...

3. Modified formulation of the problem

We modify the original assumptions by supposing that management has been persuaded to lift the ceiling on advertising expenditures. The assumption that sales vary as a linear function of the advertising budget is probably not reasonable over the wider range of advertising budget figures we no wish to consider. Suppose instead that sales are increased by 1,000 unit each time the advertising budget is doubled.