

Complete Solutions Manual  
for  
**MULTIVARIABLE CALCULUS**  
FIFTH EDITION

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## PREFACE

This *Complete Solutions Manual* contains detailed solutions to all exercises in the texts *Multivariable Calculus, Fifth Edition* and *Multivariable Calculus: Early Transcendentals, Fifth Edition* (Chapters 11–18 of *Calculus, Fifth Edition* and Chapters 10–17 of *Calculus: Early Transcendentals, Fifth Edition*) by James Stewart. A *Student Solutions Manual* is also available, which contains solutions to the odd-numbered exercises in each chapter section, review section, True-False Quiz, and Problems Plus section as well as all solutions to the Concept Check questions. (It does not, however, include solutions to any of the projects.)

The *Early Transcendentals* version of the text uses different chapter and page numbers; consequently, all section numbers and references are given in a dual format. Users of the *Early Transcendentals* text should use the references denoted by “ET.”

While we have extended every effort to ensure the accuracy of the solutions presented, we would appreciate correspondence regarding any errors that may exist. Other suggestions or comments are also welcome, and can be sent to dan clegg at [dclegg@palomar.edu](mailto:dclegg@palomar.edu) or in care of the publisher: Brooks/Cole Publishing Company, 10 Davis Drive, Belmont CA 94002-3098.

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## □ ABBREVIATIONS AND SYMBOLS

CD	concave downward
CU	concave upward
D	the domain of $f$
FDT	First Derivative Test
HA	horizontal asymptote(s)
I	interval of convergence
IP	inflection points(s)
R	radius of convergence
VA	vertical asymptote(s)
$\underline{\underline{\text{CAS}}}$	indicates the use of a computer algebra system
$\underline{\underline{\text{H}}}$	indicates the use of l'Hospital's Rule
$\underline{\underline{j}}$	indicates the use of Formula $j$ in the Table of Integrals given on Reference Pages 6–10
$\underline{\underline{s}}$	indicates the use of the substitution $\{u = \sin x, du = \cos x dx\}$
$\underline{\underline{c}}$	indicates the use of the substitution $\{u = \cos x, du = -\sin x dx\}$



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