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engineering
students depend
heavily on
concepts of*

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*mathematical
modeling. In an
age where almost
everything is
done on a
computer, author
Clive Dym*

*believes that
students need to
understand and
"own" the
underlying
mathematics that
computers are*

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doing on their
behalf. His goal
for Principles
of Mathematical
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Edition, is to
engage the
student reader
in developing a
foundational
understanding of
the subject that
will serve them
well into their

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*careers. The
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the book begins
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principles, and
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foundational
tools including
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analysis,
scaling*

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*techniques, and
approximation*

and validation

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*applications for
these tools to a
broad variety of
subjects,*

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exponential

growth and decay

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ranging from
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other systems,
and optimization
problems in
biology,
structures, and
social decision*

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making.

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students should
have already
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courses in
elementary
algebra,
trigonometry,
and first-year
calculus and
have some
familiarity with
differential*

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engineers,
scientists, and*

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*others who model
continuous*

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disciplinary

topics--from

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programming

methods and then

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the construction

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mathematics find

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more and more

broad

*application in a
number of*

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are rather

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for scientists,

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methods. One of
leaders among
means of this
class
undoubtedly is
the Mathematica
system. The book
focuses on one
important aspect*

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programming
supported by
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of particular
importance not
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appendices but
also above all
it is quite
important in the
creation of the
user means that*

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frequently used
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useful and*

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and allow
sometimes much
more efficiently
and easily to
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various purposes
first of all*

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*and can be
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assuming only that
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scientist, or anyone
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wishes/needs to use
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