BEGINNING ALGEBRA

A Text/Workbook, SIXTH EDITION

Charles P. McKeague

Beginning Algebra
A Text/Workbook
Sixth Edition

Charles P. McKeague
CUESTA COLLEGE

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Applying the Concepts

75. Savings Account Balance A man with $1,500 in a savings account makes a withdrawal of $730. Write an expression using subtraction that describes this situation.

First Bank
Account No. 12345

Date	Withdrawals	Deposits	Balance
1/1/99			1,500
2/2/99	730		

1,500 − 730

76. Temperature Change The temperature inside a Space Shuttle is 73°F before reentry. During reentry the temperature inside the craft increases 10°. On landing it drops 8°F. Write an expression using the numbers 73, 10, and 8 to describe this situation. What is the temperature inside the shuttle on landing?
73 + 10 − 8, 75°F

77. Gambling A man who has lost $35 playing roulette in Las Vegas wins $15 playing blackjack. He then loses $20 playing the wheel of fortune. Write an expression using the numbers −35, 15, and 20 to describe this situation and then simplify it.
−35 + 15 − 20 = −40

78. Altitude Change An airplane flying at 10,000 feet lowers its altitude by 1,500 feet to avoid other air traffic. Then it increases its altitude by 3,000 feet to clear a mountain range. Write an expression that describes this situation and then simplify it.
10,000 − 1,500 + 3,000 = 11,500 feet

79. Checkbook Balance Bob has $98 in his checking account when he writes a check for $65 and then another check for $53. Write a subtraction problem that gives the new balance in Bob's checkbook. What is his new balance?
98 − 65 − 53 = −$20

80. Temperature Change The temperature at noon is 23°F. Six hours later it has dropped 19°F, and by midnight it has dropped another 10°F. Write a subtraction problem that gives the temperature at midnight. What is the temperature at midnight?
23 − 19 − 10 = −6°F

81. Depreciation Stacey buys a used car for $4,500. With each year that passes, the car drops $550 in value. Write a sequence of numbers that gives the value of the car at the beginning of each of the first 5 years she owns it. Can this sequence be considered an arithmetic sequence?
$4,500, $3,950, $3,400, $2,850, $2,300; yes

82. Depreciation Wade buy... Each year after that h... $1,250 less than it wa... quence of numbers th... puter system at the b... years he owns it. Can... arithmetic sequence?
$6,575, $5,325, $4,075...

93. Garbage Production The bar chart below shows the annual production of garbage in the United States for some specific years.
(a) Use the information in the bar chart to fill in the missing entries in the table.
(b) How much more garbage was there in 1990 than in 1970? 84 million tons

YEAR	GARBAGE (MILLIONS OF TONS)
1960	88
1970	121
1980	152
1990	205
1997	217

The Growing Garbage Problem

94. Grass Growth The bar chart below shows the growth of a certain species of grass over a period of 10 days.
(a) Use the chart to fill in the missing entries in the table.
(b) How much higher is the grass after 8 days than after 3 days? 11.5 inches

DAY	PLANT HEIGHT (INCHES)	DAY	PLANT HEIGHT (INCHES)
0	0	6	6
1	0.5	7	9
2	1	8	13
3	1.5	9	18
4	3	10	23
5	4		

Overall Plant Height

95. Wireless Phone Costs The bar chart below shows the projected cost of wireless phone use through 2003.
(a) Use the chart to fill in the missing entries in the table.
(b) What is the difference in cost between 1998 and 1999? 5 cents per minute

YEAR	CENTS/MINUTE
1998	33
1999	28
2000	25
2001	23
2002	22
2003	20

Wireless Talk
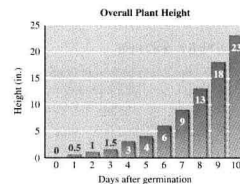
96. Temperature The following table and bar chart give the record low for each month of the year for Lake Placid, New York.
(a) Find the difference of the May record low and the April record low. 21°F
(b) Find the difference of the October record low and the November record low. 26°F

MONTH	TEMPERATURE (°F)	MONTH	TEMPERATURE (°F)
January	−36	July	35
February	−30	August	30
March	−14	September	19
April	−2	October	15
May	19	November	−11
June	22	December	−26

Record Low Temperatures for Lake Placid, New York

After working their way through the section, they are ready to start on the problems in the *Problem Set*, which gives students ample opportunity to hone their skills. Each *Problem Set* drills students, shows them how concepts can be applied, and provides another chance for review. As an added bonus, a 5- to 10-minute video lesson (featuring Pat McKeague working some of the odd-numbered problems of every section of the text) appears on the complimentary **Digital Video Companion** CD-ROM. See page 8 for details of this exciting learning tool.
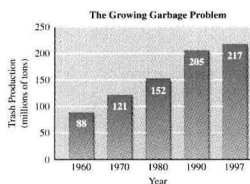
Patient explanations and clear examples

With a hallmark style, McKeague helps students develop a thorough understanding of the concepts essential to their success in algebra.

New!

Increased visualization of topics.

This sixth edition contains many more diagrams, charts, and graphs than in previous editions. This gives students additional information, in visual form, to help them understand the topics covered. These new visuals are featured prominently in each chapter opener.

Linear Equations and Inequalities in Two Variables

3
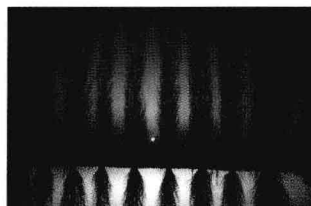
INTRODUCTION

When light comes into contact with a surface that does not transmit light, then all the light that contacts the surface is either reflected off the surface or absorbed into the surface. If we let R represent the percentage of light reflected and A represent the percentage of light absorbed, then the relationship between these two variables can be written as

$$R + A = 100$$

which is a linear equation in two variables. Table 1 and the following graph show the same relationship as that described by the equation. The table is a numerical description; the graph is a visual description.
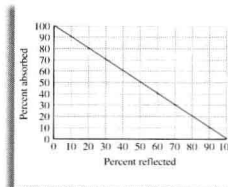
CHAPTER OUTLINE

3.1 Paired Data and Graphing Ordered Pairs

3.2 Solutions to Linear Equations in Two Variables

3.3 Graphing Linear Equations in Two Variables

3.4 More on Graphing: Intercepts

3.5 The Slope of a Line

3.6 Finding the Equation of a Line

3.7 Linear Inequalities in Two Variables

Table 1

REFLECTED AND ABSORBED LIGHT

PERCENT REFLECTED	PERCENT ABSORBED
0	100
20	80
40	60
60	40
80	20

...build tables and draw graphs from linear equa-

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STUDY SKILLS

1. Getting Ready to Take an Exam Try to arrange your daily study habits so that you have very little studying to do the night before your next exam. The next two goals will help you achieve goal number 1.

2. Review With the Exam in Mind Each day you should review material that will be covered on the next exam. Your review should consist of working problems. Preferably, the problems you work should be problems from your list of difficult problems.

3. Continue to List Difficult Problems This study skill was started in the previous chapter. You should continue to list and rework the problems that give you the most difficulty. It is this list that you will use to study for the next exam. Your goal is to go into the next exam knowing that you successfully can work any problem from your list of hard problems.

4. Pay Attention to Instructions Taking a test is different from doing homework. When you take a test, the problems will be mixed up. When you do your homework, you usually work a number of similar problems. I sometimes have students who do very well on their homework but they become confused when they see the same problems on a test because they have not paid attention to the instructions on their homework. For example, suppose you see the equation $y = 3x - 2$ on your next test. By itself, the equation is simply a statement. There isn't anything to do unless the equation is accompanied by instructions. Each of the following is a valid instruction with respect to the equation $y = 3x - 2$, and the result of applying the instructions will be different in each case:

Find x when y is 10.	(Section 2.5)
Solve for x.	(Section 2.5)
Graph the equation.	(Section 3.3)
Find the intercepts.	(Section 3.4)

There are many things to do with the equation $y = 3x - 2$. If you train yourself to pay attention to the instructions that accompany a problem as you work through the assigned problems, you will not find yourself confused about what to do with a problem when you see it on a test.

Clear application of the concepts.

Students start each chapter with clarifying applications and objectives that help them map out upcoming concepts. Chapters begin with a two-page opening that includes real-world applications or a historical example followed by *Study Skills* (helpful tips for students).

Enhanced!

Step-by-step guides to successful problem solving.

McKeague's *Blueprint for Problem Solving* offers a detailed outline of the steps needed to successfully attempt application problems. Intended as a guide to problem solving in general, the *Blueprint* overlays the solution process to all the application problems in the first few chapters of the book. As students become more familiar with problem solving, the steps in the *Blueprint* are streamlined.

4.4 Applications

I often have heard students remark about the word problems in beginning algebra: "What does this have to do with real life?" Most of the word problems we will encounter don't have much to do with "real life." We are actually just practicing. Ultimately, all problems requiring the use of algebra are word problems; that is, they are stated in words first, then translated to symbols. The problem then is solved by some system of mathematics, like algebra. Most real applications involve calculus or higher levels of mathematics. So, if the problems we solve are upsetting or frustrating to you, then you probably are taking them too seriously.

The word problems in this section have two unknown quantities. We will write two equations in two variables (each of which represents one of the unknown quantities), which of course is a system of equations. We then solve the system by one of the methods developed in the previous sections of this chapter. Here are the steps to follow in solving these word problems.

Blueprint for Problem Solving Using a System of Equations

Step 1: **Read** the problem, and then mentally **list** the items that are known and the items that are unknown.

Step 2: **Assign variables** to each of the unknown items; that is, let $x =$ one of the unknown items and $y =$ the other unknown item. Then **translate** the other **information** in the problem to expressions involving the two variables.

Step 3: **Reread** the problem, and then **write a system of equations,** using the items and variables listed in steps 1 and 2, that describes the situation.

Step 4: **Solve the system** found in step 3.

Step 5: **Write** your **answers** using complete sentences.

Step 6: **Reread** the problem, and **check** your solution with the original words in the problem.

Remember, the more problems you work, the more problems you will be able to work. If you have trouble getting started on the problem set, come back to the examples and work through them yourself. The examples are similar to the problems found in the problem set.

Number Problem

EXAMPLE 1 One number is 2 more than 5 times another number. Their sum is

lueprint, we have

he two numbers have a sum of 20 and
n is 2 more than 5 times the other. We
t the numbers themselves are.

one of the numbers and y represent the
mber is 2 more than 5 times another"

$$y = 5x + 2$$

translates to

$$x + y = 20$$

---

242   LINEAR EQUATIONS AND INEQUALITIES IN TWO VARIABLES

The graph of $y = -\frac{1}{3}x + 2$ is shown in Figure 4. Compare this graph, and the method used to obtain it, with Example 3 in Section 3.3.
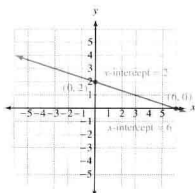
Figure 4

✐ Getting Ready for Class

After reading through the preceding section, respond in your own words and in complete sentences.

A. What is the x-intercept for a graph?
B. What is the y-intercept for a graph?
C. How do we find the y-intercept for a line from the equation?
D. How do we graph a line using its intercepts?

New!

Class-preparation exercises that build confidence.

Located before each problem set, *Getting Ready for Class* sections require written responses from students, and can be answered by reading the preceding section. They are to be done before the students come to class.

Helping students understand the logic behind the mathematics

Chapter after chapter, McKeague helps students develop their analytical skills while building on their accumulated knowledge and confidence.

Applying the Concepts

45. Hourly Wages Jane takes a job at the local Marcy's department store. Her job pays $8.00 per hour. The graph shows how much Jane earns for working from 0 to 40 hours in a week.

(a) List three ordered pairs that lie on the line graph.
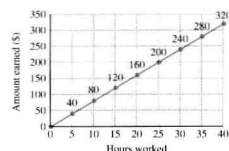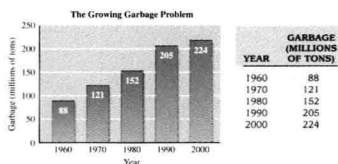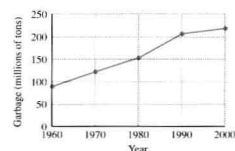   (5, 40), (10, 80), (20, 160)
(b) How much will she earn for working 40 hours?
   $320
(c) If her check for one week is $240, how many hours did she work?
   30 hours
(d) She works 35 hours one week, but her paycheck before deductions are subtracted out is for $260. Is this correct? Explain.
   No, is she works 35 hours, she will be paid $280.

46. Hourly Wages Judy takes a job at Gigi's boutique. Her job pays $6.00 per hour plus $50 per week in commission. The graph shows how much Judy earns for working from 0 to 40 hours in a week.

(a) List three ordered pairs that lie on the line graph.
   (5, 80), (10, 110), (20, 170)
(b) How much will she earn for working 40 hours?
   $290
(c) If her check for one week is $230, how many hours did she work?
   30 hours
(d) She works 35 hours one week, but her paycheck before deductions are subtracted out is for $260. Is this correct? Explain.
   Yes, this is the correct amount.

47. Garbage Production The table and bar chart from Problem 93 in Problem Set 1.4 are shown here. Each gives the annual production of garbage in the United States for some specific years.

The Growing Garbage Problem

YEAR	GARBAGE (MILLIONS OF TONS)
1960	88
1970	121
1980	152
1990	205
2000	224

Use the information from the table and bar chart to construct a line graph using the template below.

48. Grass... in Pr... grow...

Use t... struc...

Exercises that help students interact with the mathematics in various forms.

Students are required to analyze information from tables and convert it to graphical form, including bar charts and scatter diagrams. From there they are required to graph ordered pairs and linear equations on a rectangular coordinate system.

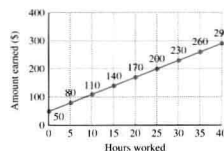### An incorporation of geometry that demonstrates its relationship to algebra.

Facts from Geometry are accompanied by examples so students see how geometry is related to the algebra they are learning.

Step 6: Reread, and check.

The interest at 8% is 8% of 3,000 = 0.08(3,000) = $240
The interest at 9% is 9% of 5,000 = 0.09(5,000) = $450
The total interest is $690

Facts From Geometry: Labeling Triangles and the Sum of the Angles in a Triangle

One way to label the important parts of a triangle is to label the vertices with capital letters and the sides with small letters, as shown in Figure 1.
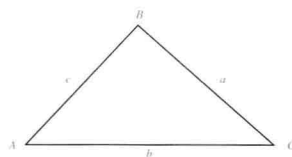
Figure 1

In Figure 1, notice that side a is opposite vertex A, side b is opposite vertex B, and side c is opposite vertex C. Also, because each vertex is the vertex of one of the angles of the triangle, we refer to three interior angles as A, B, and C.

In any triangle, the sum of the interior angles is 180°. For the triangle shown in Figure 1, the relationship is written

$$A + B + C = 180°$$

umn is associated with the vertical axis, as shown in Figure 2 below.

EXAMPLE 3 The angles in a triangle are such that one angle is twice the smallest angle, whereas the third angle is three times as large as the smallest angle. Find the measure of all three angles.

SOLUTION

Step 1: Read and list.
Known items: The sum of all three angles is 180°, one angle is twice the smallest angle, the largest angle is three times the smallest angle.
Unknown items: The measure of each angle

Step 2: Assign a variable, and translate information.
Let x be the smallest angle, then $2x$ will be the measure of another angle and $3x$ will be the measure of the largest angle.

3. The angles in a triangle are such that one angle is three times the smallest angle, whereas the largest angle is five times the smallest angle. Find the measure of all three angles.

Answer
2. $4,000

CHAPTER 3 PROJECTS

Linear Equations and Inequalities in Two Variables

■ GROUP PROJECT ■

Reading Graphs

Number of People: 2-3

Time Needed: 5–10 minutes

Equipment Needed: Pencil and paper

Background: I found the following diagram while shopping for some track lighting for my home. I was impressed by the diagram because it displays a lot of useful information in a very efficient manner. As the diagram indicates, the amount of light that falls on a surface depends on how far above the surface the light is placed and how much the light spreads out on the surface. Assume that this light illuminates a circle on a flat surface, and work the following problems.

Although most of the graphs we have encountered in this chapter have been straight lines, many of the graphs that describe the world around us are not straight lines. In this group project we gain experience working with graphs that are not straight lines.

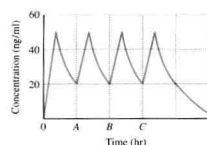**Procedure:** Read the introduction to each problem below. Then use the graphs to answer the questions.

Figure 1

1. A patient is taking a prescribed dose of a medication every 4 hours during the day to relieve the symptoms of a cold. Figure 1 shows how the concentration of that medication in the patient's system changes over time. The 0 on the horizontal axis corresponds to the time the patient takes the first dose of medication. (The units of concentration on the vertical axis are nanograms per milliliter.)
   (a) Explain what the steep vertical line segments show with regard to the patient and his medication.
   (b) What has happened to make the graph fall off on the right?
   (c) What is the maximum concentration of the medication in the patient's system during the time period shown in Figure 1?
   (d) Find the values of A, B, and C.

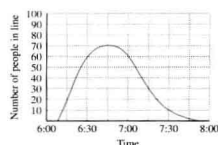2. **Reading Graphs.** Figure 2 shows the number of people in line at a theater box office to buy tickets for a mov
   6:45.
   (a) How many people are in line a
   (b) How many people are in line v
   (c) How many people are in line v
   (d) At what times are there 60 pe
   (e) How long after the show start

Figure 2

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Putting the pieces together.

End-of-chapter retrospectives approach concepts from a variety of perspectives, ensuring that students truly understand what they've just learned. Retrospectives include *Chapter Summaries, Cumulative Reviews* (beginning in Chapter 2), *Chapter Reviews,* and a *Chapter Test,* followed by a group project and research project for each chapter.

CHAPTER 4 PROJECTS

■ RESEARCH PROJECT ■

Cartesian Coordinate System

The stamp shown here was issued by Albania in 1966. It shows the French philosopher and mathematician Rene Descartes. As we mentioned earlier in this chapter, Descartes is credited with the discovery of the rectangular coordinate system. (Notice the coordinate system in the background of the stamp.)

Descartes insisted that his best theories came to him while resting in bed. He once said "the only way to do good work in mathematics and preserve one's health is never to get up in the morning before one feels inclined to do so." One story of how he came to develop the Cartesian (from *Descartes*) coordinate system is as follows: One morning, while lying in bed, he noticed a fly crawling on the ceiling. After studying it, he realized he could state the fly's position on the ceiling by giving its distance from each of the edges of the ceiling. Research this story and then put your results into an essay that shows the connection between the position of the fly on the ceiling and the coordinates of points in our rectangular coordinate system.

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Also in this edition:
- Coverage of number sequences, unit analysis, and conditional statements.
- Timely graphing calculator material that keeps students up to date with current technology.
- Early coverage of graphing and functions —material on graphing equations in two variables starts in Chapter 3.

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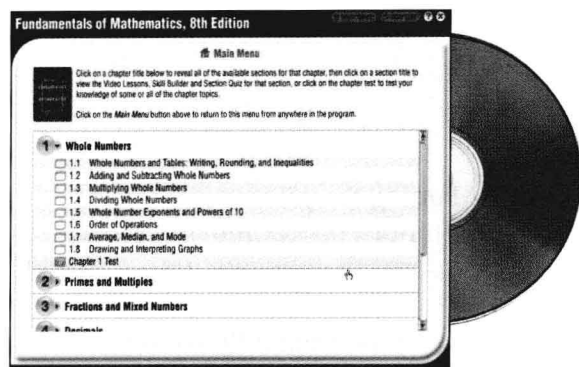
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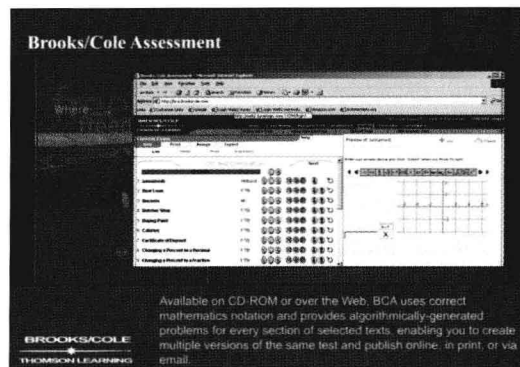
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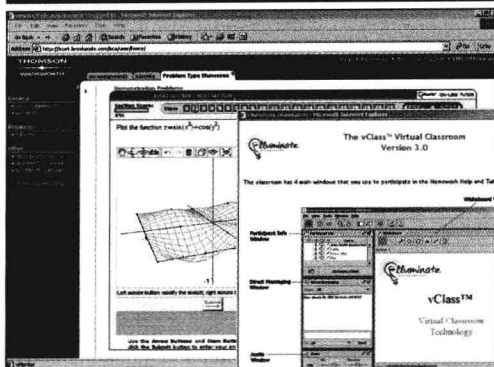
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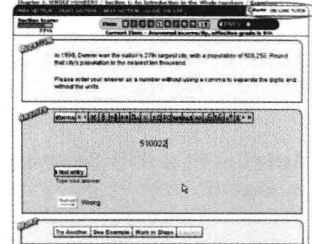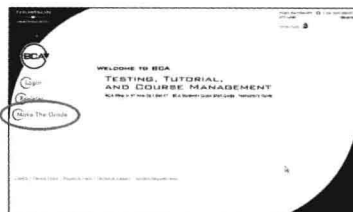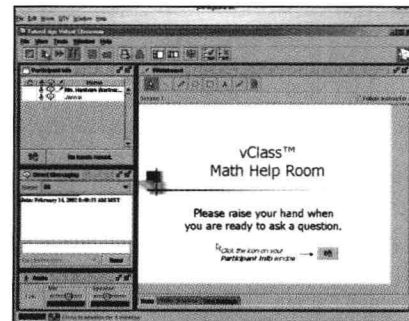
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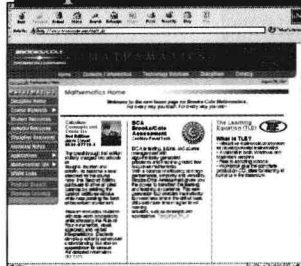
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Test Bank

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by *Cynthia Arem*, Pima Community College (0-534-38634-2)

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by *Deborah J. Cochener and Bonnie M. Hodge*, both of Austin Peay State University (0-534-36149-8)

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by *Judy Jones*, Valencia Community College (0-534-36771-2)

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by *Debbie Garrison, Judy Jones, and Jolene Rhodes*, all of Valencia Community College (0-534-35355-X)

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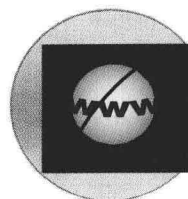
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Chapter 1 - Basics

Ideas for Instruction	Print Resources	Media Resources for Instructors	Media Resources for Students

Ideas for Instruction

Explorations in Beginning and Intermediate Algebra
Activities 1–3

Activities for Beginning and Intermediate Algebra
Activities 1–2

Active Arithmetic and Algebra
■ Addition and Subtraction with Integers
■ Understanding Fractions

Math Facts
Pages 1–2, 15–16, 23–30, 41–56, 63–76, 83–86, 89–114, 119–122,137–142, 159–160, 165–166

Algebra Facts, 2/E
Pages 1–2, 9–10, 17–18, 25–26, 71–73, 79–80, 89–90, 93–94, 113–114, 121–128

How to Be a Great Math Student, 3/E

Conquering Math Anxiety, 2/E

Print Resources

Test Bank
Forms A–H

Complete Solutions Manual
Chapter 1

Student Solutions Manual
Chapter 1

Media Resources for Instructors

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Historical Notes, Real-World Math, Math News, Career Center, Math Facts, Web Quizzes, and Internet Activities.
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Text-Specific Videos
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InfoTrac® College Edition
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Chapter 1: Lecture notes, discussion threads, and quizzes on WebCT.

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TI-83 Segment 1
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Media Resources for Students

Digital Video Companion
Chapter 1

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Chapter 2 - Linear Equations and Inequalities

Ideas for Instruction	Print Resources	Media Resources for Instructors	Media Resources for Students

Ideas for Instruction

Explorations in Beginning and Intermediate Algebra
Activities 4–5, 10, 12

Active Arithmetic and Algebra
■ The Algebraic Match-up
■ Equation Triangles

Math Facts
Pages 5–14, 61–62, 77–80, 163–164

Algebra Facts, 2/E
Pages 5–8, 13–14, 31–32, 71–72, 75–76, 113–114, 129–130, 137–140, 147–150, 155–156

How to Be a Great Math Student, 3/E

Conquering Math Anxiety, 2/E

Print Resources

Test Bank
Forms A–H

Complete Solutions Manual
Chapter 2

Student Solutions Manual
Chapter 2

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TI-83 Segment 12
TI-86 Segment 12

Media Resources for Students

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Chapter 2

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Chapter 2: Lecture notes, discussion threads, and quizzes on WebCT.

TI-83 and TI-86 Graphing Calculator Videos
TI-83 Segment 12
TI-86 Segment 12

Ideas for Instruction	Print Resources	Media Resources for Instructors	Media Resources for Students
Explorations in Beginning and Intermediate Algebra Activities 22–26	**Test Bank** Forms A–H	**BCA Testing** Contains 20 text-specific algorithmic problems per section. Tests can be easily created using the *Test Wizard*. http://bca.brookscole.com	**Digital Video Companion** Chapter 3
Activities for Beginning and Intermediate Algebra Activities 7–13, 16	**Complete Solutions Manual** Chapter 3	**BCA Tutorial** Students can have unlimited practice in questions and problems. http://bca.brookscole.com	**Make the Grade** **BCA Tutorial** Students can have unlimited practice in questions and problems.
Active Arithmetic and Algebra ■ Describing a Linear Relationship	**Student Solutions Manual** Chapter 3	**Web Site** Historical Notes, Real-World Math, Math News, Career Center, Math Facts, Web Quizzes, and Internet Activities. http://mathematics.brookscole.com	**vMentor** Customized interactive homework help and tutorial services online http://bca.brookscole.com
Math Facts Pages 5–13, 157–158, 161–164		**Text-Specific Videos** Chapter 3	**Web Site** Historical Notes, Real-World Math, Math News, Career Center, Math Facts, Web Quizzes, and Internet Activities. http://mathematics.brookscole.com
Algebra Facts, 2/E Pages 63–68, 91–92, 111–112, 135–136		**InfoTrac® College Edition** www.infotrac-college.com	**Text-Specific Videos** Chapter 3
How to Be a Great Math Student, 3/E		**WebTutor** Chapter 3: Lecture notes, discussion threads, and quizzes on WebCT.	**InfoTrac® College Edition** www.infotrac-college.com
Conquering Math Anxiety, 2/E		**TI-83 and TI-86 Graphing Calculator Videos** TI-83 Segment 2 TI-86 Segment 3	**WebTutor** Chapter 3: Lecture notes, discussion threads, and quizzes on WebCT.
			TI-83 and TI-86 Graphing Calculator Videos TI-83 Segment 2 TI-86 Segment 3

Chapter 4 - Systems of Linear Equations

Ideas for Instruction	Print Resources	Media Resources for Instructors	Media Resources for Students
Explorations in Beginning and Intermediate Algebra Activity 27	**Test Bank** Forms A–H	**BCA Testing** Contains 20 text-specific algorithmic problems per section. Tests can be easily created using the *Test Wizard*. http://bca.brookscole.com	**Digital Video Companion** Chapter 4
Activities for Beginning and Intermediate Algebra Activities 14–15	**Complete Solutions Manual** Chapter 4	**BCA Tutorial** Students can have unlimited practice in questions and problems. http://bca.brookscole.com	**Make the Grade** **BCA Tutorial** Students can have unlimited practice in questions and problems.
Math Facts Pages 3–14, 77–80, 161–164	**Student Solutions Manual** Chapter 4	**Web Site** Historical Notes, Real-World Math, Math News, Career Center, Math Facts, Web Quizzes, and Internet Activities. http://mathematics.brookscole.com	**vMentor** Customized interactive homework help and tutorial services online http://bca.brookscole.com
Algebra Facts, 2/E Pages 131–132		**Text-Specific Videos** Chapter 4	**Web Site** Historical Notes, Real-World Math, Math News, Career Center, Math Facts, Web Quizzes, and Internet Activities. http://mathematics.brookscole.com
How to Be a Great Math Student, 3/E		**InfoTrac® College Edition** www.infotrac-college.com	**Text-Specific Videos** Chapter 4
Conquering Math Anxiety, 2/E		**WebTutor** Chapter 4: Lecture notes, discussion threads, and quizzes on WebCT.	**InfoTrac® College Edition** www.infotrac-college.com
		TI-83 and TI-86 Graphing Calculator Videos TI-83 Segment 4 TI-86 Segment 5	**WebTutor** Chapter 4: Lecture notes, discussion threads, and quizzes on WebCT.
			TI-83 and TI-86 Graphing Calculator Videos TI-83 Segment 4 TI-86 Segment 5

Chapter 5 - Exponents and Polynomials

Ideas for Instruction	Print Resources	Media Resources for Instructors	Media Resources for Students
Explorations in Beginning and Intermediate Algebra Activities 6–7 **Activities for Beginning and Intermediate Algebra** Activity 4 **Active Arithmetic and Algebra** ■ A Polynomial Puzzle **Math Facts** Pages 143–144, 147–148 **Algebra Facts, 2/E** Pages 3–4, 11–14, 27–30, 35–40, 75–76, 79–86, 95–98, 143–144, 151–156 **How to Be a Great Math Student, 3/E** **Conquering Math Anxiety, 2/E**	**Test Bank** Forms A–H **Complete Solutions Manual** Chapter 5 **Student Solutions Manual** Chapter 5	**BCA Testing** Contains 20 text-specific algorithmic problems per section. Tests can be easily created using the *Test Wizard*. http://bca.brookscole.com **BCA Tutorial** Students can have unlimited practice in questions and problems. http://bca.brookscole.com **Web Site** Historical Notes, Real-World Math, Math News, Career Center, Math Facts, Web Quizzes, and Internet Activities. http://mathematics.brookscole.com **Text-Specific Videos** Chapter 5 **InfoTrac® College Edition** www.infotrac-college.com **WebTutor™** Chapter 5: Lecture notes, discussion threads, and quizzes on WebCT. **TI-83 and TI-86 Graphing Calculator Videos** TI-83 Segment 1 TI-86 Segment 1	**Digital Video Companion** Chapter 5 **Make the Grade** **BCA Tutorial** Students can have unlimited practice in questions and problems. **vMentor™** Customized interactive homework help and tutorial services online http://bca.brookscole.com **Web Site** Historical Notes, Real-World Math, Math News, Career Center, Math Facts, Web Quizzes, and Internet Activities. http://mathematics.brookscole.com **Text-Specific Videos** Chapter 5 **InfoTrac® College Edition** www.infotrac-college.com **WebTutor™** Chapter 5: Lecture notes, discussion threads, and quizzes on WebCT. **TI-83 and TI-86 Graphing Calculator Videos** TI-83 Segment 1 TI-86 Segment 1

Chapter 6 - Factoring

Ideas for Instruction	Print Resources	Media Resources for Instructors	Media Resources for Students
Explorations in Beginning and Intermediate Algebra Activity 15 **Activities for Beginning and Intermediate Algebra** Activities 5–6 **Math Facts** Pages 81–82, 131–132, 143–144, 147–148 **Algebra Facts, 2/E** Pages 15–16, 43–48, 51–52, 69–70, 101–104 **How to Be a Great Math Student, 3/E** **Conquering Math Anxiety, 2/E**	**Test Bank** Forms A–H **Complete Solutions Manual** Chapter 6 **Student Solutions Manual** Chapter 6	**BCA Testing** Contains 20 text-specific algorithmic problems per section. Tests can be easily created using the *Test Wizard*. http://bca.brookscole.com **BCA Tutorial** Students can have unlimited practice in questions and problems. http://bca.brookscole.com **Web Site** Historical Notes, Real-World Math, Math News, Career Center, Math Facts, Web Quizzes, and Internet Activities. http://mathematics.brookscole.com **Text-Specific Videos** Chapter 6 **InfoTrac® College Edition** www.infotrac-college.com **WebTutor™** Chapter 6: Lecture notes, discussion threads, and quizzes on WebCT.	**Digital Video Companion** Chapter 6 **Make the Grade** **BCA Tutorial** Students can have unlimited practice in questions and problems. **vMentor™** Customized interactive homework help and tutorial services online http://bca.brookscole.com **Web Site** Historical Notes, Real-World Math, Math News, Career Center, Math Facts, Web Quizzes, and Internet Activities. http://mathematics.brookscole.com **Text-Specific Videos** Chapter 6 **InfoTrac® College Edition** www.infotrac-college.com **WebTutor™** Chapter 6: Lecture notes, discussion threads, and quizzes on WebCT.

Chapter 7 - Rational Expressions

Ideas for Instruction	Print Resources	Media Resources for Instructors	Media Resources for Students
Explorations in Beginning and Intermediate Algebra Activity 6	**Test Bank** Forms A–H	**BCA Testing** Contains 20 text-specific algorithmic problems per section. Tests can be easily created using the *Test Wizard*. http://bca.brookscole.com	**Digital Video Companion** Chapter 7
Activities for Beginning and Intermediate Algebra Activities 18–19	**Complete Solutions Manual** Chapter 7		**Make the Grade** **BCA Tutorial** Students can have unlimited practice in questions and problems.
Active Arithmetic and Algebra ■ Mathematics of Drawing the Human Figure ■ Painting the Classroom ■ Volume of Food Containers	**Student Solutions Manual** Chapter 7	**BCA Tutorial** Students can have unlimited practice in questions and problems. http://bca.brookscole.com	**vMentor™** Customized interactive homework help and tutorial services online http://bca.brookscole.com
Math Facts Pages 63–72, 83–86, 89–98, 135–138		**Web Site** Historical Notes, Real-World Math, Math News, Career Center, Math Facts, Web Quizzes, and Internet Activities. http://mathematics.brookscole.com	**Web Site** Historical Notes, Real-World Math, Math News, Career Center, Math Facts, Web Quizzes, and Internet Activities. http://mathematics.brookscole.com
Algebra Facts, 2/E Pages 21–22, 27–30, 53–54, 57–62, 77–78, 109–110, 119–120		**Text-Specific Videos** Chapter 7	**Text-Specific Videos** Chapter 7
How to Be a Great Math Student, 3/E		**InfoTrac® College Edition** www.infotrac-college.com	**InfoTrac® College Edition** www.infotrac-college.com
Conquering Math Anxiety, 2/E		**WebTutor™** Chapter 7: Lecture notes, discussion threads, and quizzes on WebCT.	**WebTutor™** Chapter 7: Lecture notes, discussion threads, and quizzes on WebCT.
		TI-83 and TI-86 Graphing Calculator Videos TI-83 Segment 3-4 TI-86 Segment 4-5	**TI-83 and TI-86 Graphing Calculator Videos** TI-83 Segment 3-4 TI-86 Segment 4-5

Chapter 8 - Roots and Radicals

Ideas for Instruction	Print Resources	Media Resources for Instructors	Media Resources for Students
Explorations in Beginning and Intermediate Algebra Activities 8, 21, 30	**Test Bank** Forms A–H	**BCA Testing** Contains 20 text-specific algorithmic problems per section. Tests can be easily created using the *Test Wizard*. http://bca.brookscole.com	**Digital Video Companion** Chapter 8
Activities for Beginning and Intermediate Algebra Activity 20	**Complete Solutions Manual** Chapter 8		**Make the Grade** **BCA Tutorial** Students can have unlimited practice in questions and problems.
Math Facts Pages 37–40, 133–134, 147–156	**Student Solutions Manual** Chapter 8	**BCA Tutorial** Students can have unlimited practice in questions and problems. http://bca.brookscole.com	**vMentor™** Customized interactive homework help and tutorial services online http://bca.brookscole.com
Algebra Facts, 2/E Pages 55–56, 105–108, 115–118		**Web Site** Historical Notes, Real-World Math, Math News, Career Center, Math Facts, Web Quizzes, and Internet Activities. http://mathematics.brookscole.com	**Web Site** Historical Notes, Real-World Math, Math News, Career Center, Math Facts, Web Quizzes, and Internet Activities. http://mathematics.brookscole.com
How to Be a Great Math Student, 3/E		**Text-Specific Videos** Chapter 8	**Text-Specific Videos** Chapter 8
Conquering Math Anxiety, 2/E		**InfoTrac® College Edition** www.infotrac-college.com	**InfoTrac® College Edition** www.infotrac-college.com
		WebTutor™ Chapter 8: Lecture notes, discussion threads, and quizzes on WebCT.	**WebTutor™** Chapter 8: Lecture notes, discussion threads, and quizzes on WebCT.
		TI-83 and TI-86 Graphing Calculator Videos TI-83 Segment 1 TI-86 Segment 1	**TI-83 and TI-86 Graphing Calculator Videos** TI-83 Segment 1 TI-86 Segment 1

Ideas for Instruction	Print Resources	Media Resources for Instructors	Media Resources for Students
Explorations in Beginning and Intermediate Algebra Activity 16–18, 31 **Activities for Beginning and Intermediate Algebra** Activity 17 **Math Facts** Pages 69–70, 151–156 **Algebra Facts, 2/E** Pages 19–20, 23–24, 99–104 **How to Be a Great Math Student, 3/E** **Conquering Math Anxiety, 2/E**	**Test Bank** Forms A–H **Complete Solutions Manual** Chapter 9 **Student Solutions Manual** Chapter 9	**BCA Testing** Contains 20 text-specific algorithmic problems per section. Tests can be easily created using the *Test Wizard*. http://bca.brookscole.com **BCA Tutorial** Students can have unlimited practice in questions and problems. http://bca.brookscole.com **Web Site** Historical Notes, Real-World Math, Math News, Career Center, Math Facts, Web Quizzes, and Internet Activities. http://mathematics.brookscole.com **Text-Specific Videos** Chapter 9 **InfoTrac® College Edition** www.infotrac-college.com **WebTutor™** Chapter 9: Lecture notes, discussion threads, and quizzes on WebCT. **TI-83 and TI-86 Graphing Calculator Videos** TI-83 Segment 3 TI-86 Segment 4	**Digital Video Companion** Chapter 9 ## Make the Grade **BCA Tutorial** Students can have unlimited practice in questions and problems. **vMentor™** Customized interactive homework help and tutorial services online http://bca.brookscole.com **Web Site** Historical Notes, Real-World Math, Math News, Career Center, Math Facts, Web Quizzes, and Internet Activities. http://mathematics.brookscole.com **Text-Specific Videos** Chapter 9 **InfoTrac® College Edition** www.infotrac-college.com **WebTutor™** Chapter 9: Lecture notes, discussion threads, and quizzes on WebCT. **TI-83 and TI-86 Graphing Calculator Videos** TI-83 Segment 3 TI-86 Segment 4