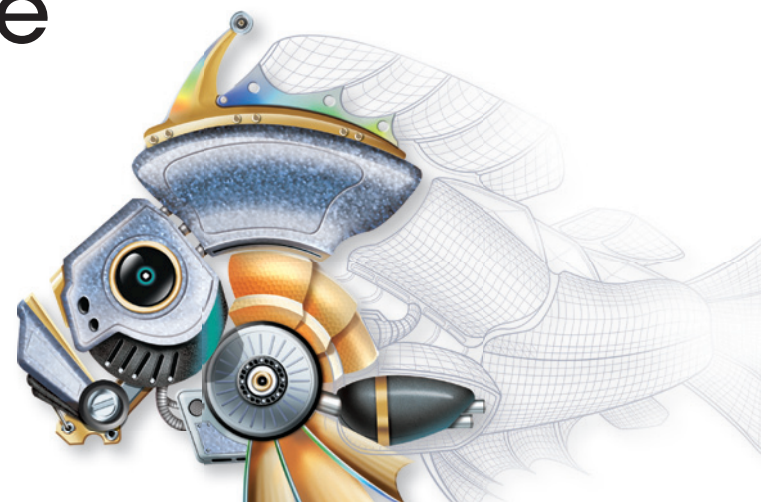


Reviewer's Guide

Pearson Integrated High School Mathematics

Mathematics I • Mathematics II • Mathematics III

Common Core



Pearson Integrated High School Mathematics

Pearson Integrated High School Mathematics offers a hybrid instructional model that consists of digital delivery of content during instructional time, supplemented by a write-in student edition (worktext) in which students capture their understandings of the concepts presented as they work through the problems.

Out-of-classroom support is available through the animated lessons, math tutor videos, and instructional summaries in the Student Worktext. The in-class instruction can be further enhanced with the robust math tools and dynamic activities that are part of the digital courseware.

Introduction to *Pearson Integrated High School Mathematics*

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Online Digital Walkthrough

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MathXL® for School	29
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PROGRAM COMPONENTS

COMPONENT	PRINT	CD/DVD	ONLINE PearsonSuccessNet	MOBILE iPad/Android
Student Worktext	√	√	√	√
Teacher's Guide	√	√	√	√
Pearson Integrated High School Mathematics Implementation Guide	√		√	√
Interactive Digital Path Chapter Opening Videos Animated Lessons* Self-Assessments* Dynamic Activities* Math Tools* Key Concepts* Lesson Vocabulary and Glossary* MathXL® for School Interactive Practice			√	
Virtual Nerd™ Tutorial Videos			√	√
Student Resources Practice, Problem Solving, and Test Prep Worksheets Homework Video Tutors in English and Spanish Multilingual Handbook (10 languages)			√	
Teaching Resources Lesson Resources: Leveled Practice, Reteaching, Enrichment, ELL/Vocabulary Support, Problem Solving, Standardized Test Prep, Activities, Games, Puzzles, Daily Lesson Quiz Chapter Resources: Teaching with TI Technology, Find the Errors, Performance Tasks, Chapter Projects			√	
Online Lesson Planner with Common Core State Standards			√	
SuccessTracker Assessment System with Common Core State Standards			√	
Assessment Resources Diagnostic Test, Lesson Quizzes, Chapter Tests, Benchmark Tests, End of Course Test			√	
Digital Lesson DVD*		√		
ExamView® Assessment Suite CD-ROM		√		
Answers and Solutions DVD		√		

The Student Worktext is the students' personal record of their mathematics learning over the course of the school year. It also provides an artifact of learning that students can draw from in subsequent courses. This interactive format helps students stay organized and provides a resource for students to review (vocabulary, key concepts, formulas, properties, examples) and practice independently.

Lesson Components

- **Essential Understandings** and lesson exposition of key concepts
- Highlighted vocabulary words
- Ample space for students to complete the **Got It?** problems that follow each Problem
- **Think and Plan** boxes model the thinking embraced by the **Common Core State Standards**.
- **Lesson Check** with questions aligned to the **Common Core Standards for Mathematical Practice**
- Practice and homework exercises (levels A, B, and C)
- QR codes throughout each lesson that, when clicked on using a smartphone or tablet computer, will direct students to the appropriate Virtual Nerd™ tutorial video

Chapter Components

- **Get Ready!** diagnostic assessment at the beginning of every chapter
- **Chapter Review** with a summary of the main concepts and accompanying exercises for each lesson
- **Pull It All Together**—rich, real world performance tasks designed to reflect the performance tasks students are likely to encounter on the Next Generation Assessments currently under development
- Technology, Activity, and Lesson Labs



A unique feature of *Pearson Integrated High School Mathematics* is the QR code at the beginning of every lesson. QR codes can be scanned by most mobile devices like phones, iPads®, and even laptop computers. Students can scan the QR code to access Virtual Nerd™ tutorial videos that directly relate to the content in the lesson. To learn more about Virtual Nerd™ tutorial videos and the exclusive dynamic whiteboard go to virtualnerd.com.



VirtualNerd

how do you solve a system of equations by graphing?

Find the solution to the following system of equations:
 $2x - y = 2$
 $2x + y = 6$

Find the Solution

$2x - y = 2$ and $2x + y = 6$

1 Solve for y $y = 2x - 2$ $y = -2x + 6$ 4 Check

2 Graph

3 Find intersection

Solution: (2, 2)

$2x - y = 2$
 $2(2) - 2 = 2$
 $4 - 2 = 2$
 $2 = 2$ ✓

$2x + y = 6$
 $2(2) + 2 = 6$
 $4 + 2 = 6$
 $6 = 6$ ✓

Find the Solution

$2x - y = 2$
 $y = 2x - 2$

$2x - y = 2$
 $2(2) - 2 = 2$
 $4 - 2 = 2$
 $2 = 2$ ✓

$2x + y = 6$
 $y = -2x + 6$

$2x + y = 6$
 $2(2) + 2 = 6$
 $4 + 2 = 6$
 $6 = 6$ ✓

Solution: (2, 2)

STEP BY STEP

ep 1) write equations in slope-intercept form

Step 2) Graph lines

Step 3) Find point of intersection

Step 4) Check answer

One solution means our system is independent and consistent

6-1

Solving Systems by Graphing

Objectives To solve systems of equations by graphing
To analyze special systems

Solve It! Write your solution in the space below.

Two or more linear equations form a system of linear equations. Any ordered pair that makes all of the equations in a system true is a solution of a system of linear equations.

Essential Understanding You cannot solve systems of linear equations to model problems. Systems of equations can be solved in more than one way. One method is to graph each equation and find the intersection point, if one exists.

Problem 1 Solving a System of Equations by Graphing

Got It? What is the solution of the system? Use a graph. Check your answer.

$y = 2x + 4$
 $y = -x + 2$

Think
How does graphing each equation help you find the solution?

Lesson 6-1 Solving Systems by Graphing
3

*The Virtual Nerd™ tutorial videos can also be accessed, without the QR code, on Pearson SuccessNet (the site of all the digital courseware).

The Teacher's Guide is a comprehensive tool that teachers can use as they plan for and teach every phase of the 5-part lesson of the program. At the chapter level, teachers find math background, tips for error prevention, and assignment guides to help them in planning for instruction. At the lesson level, teachers find resources for instruction, practice, assessment, and remediation. To help with planning, there are teaching notes and probing questions to the left of images of each **Solve It!** and problem that teachers will be presenting from the digital courseware.

Lesson Components:

- Preparing to Teach: **Big Ideas and Essential Understandings, Mathematics Background, ELL Support, Lesson Vocabulary, Dynamic Activities**
- 5-Step Lesson Structure: **Interactive Learning, Guided Instruction, Lesson Check, Practice, Assess and Remediate**
- All necessary teaching notes and guiding questions with answers to facilitate the lesson
- Answers at point of use with correlations to the **Common Core Standards for Mathematical Practice**
- Images of the student-facing pieces: the problems from the digital courseware and reduced parts of the student pages
- **Lesson Quiz** with prescription for remediation
- Intervention, On-Level, and Extension resources

Chapter Components:

- **Get Ready!** Diagnostic Assessment
- Chapter Opener with an overview of the **Big Ideas and Essential Understandings**
- **Mathematics Background** with common errors
- **Chapter Review** with **Summative Questions**
- **Pull It All Together** performance tasks aligned to the **Common Core Standards for Math Content** and the **Standards for Mathematical Practice**

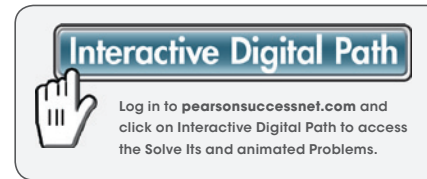
Pearson SuccessNet® is the gateway for students and teachers to all the digital components available for *Pearson Integrated High School Mathematics*.

Online Teacher Resources

- Teacher's Guide
- Editable Teaching Resources
- Progress Monitoring Assessments
- Implementation Guide
- Interactive Digital Path
- Additional Presentation Tools and Online Manipulatives
- SuccessTracker Assessment System with automatic grading
- Class and Student Reports aligned to the **Common Core State Standards**
- Classroom Management System
- Lesson Planner with editable lessons
- Content Search by Performance Standard

Online Student Resources

- Interactive Student Worktext
- Notetaking and Highlighting tools
- Student Worksheets
- Homework Video Tutors in English and Spanish
- Interactive Digital Path with videos, guided problems with audio, Dynamic Activities, self-check quizzes, glossary with audio in English and Spanish
- MathXL® for School—step-by-step practice with immediate feedback
- Math Tools and Online Manipulatives
- Virtual Nerd™ Tutorial Videos
- Multilingual Handbook
- Assessments with immediate feedback and personalized remediation



PEARSON SUCCESSNET ICONS



Show the student-produced video demonstrating relevant and engaging applications of the new concepts in the chapter.



Find online definitions for the new terms with audio explanations in both English and Spanish.



Start each lesson with an attention-getting problem. View the problem online with helpful hints.



Increase students' depth of knowledge with interactive online activities.



Show Problems from each lesson solved step by step. Instant replay allows students to go at their own pace when studying online.



Prepare students for the Mid-Chapter Quiz and Chapter Test with online practice and review.

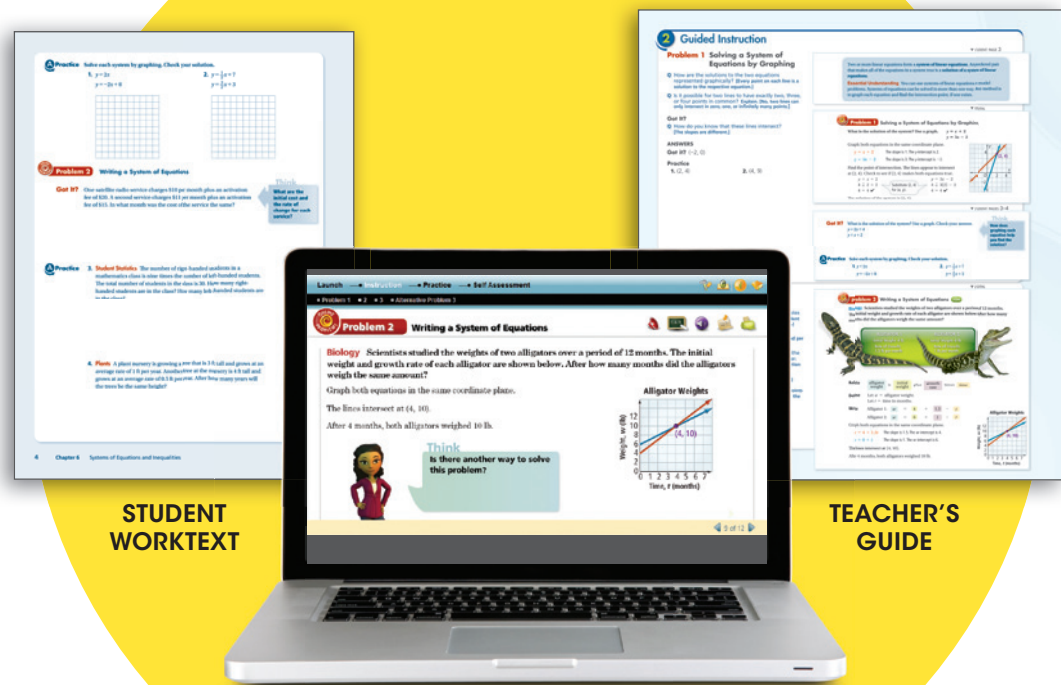
From a pedagogical perspective, this hybrid program will maintain the same five-part lesson structure that has been proven to be effective with *Pearson Prentice Hall High School Mathematics: Interactive Learning, Guided Instruction, Lesson Check, Practice, and Assess and Remediate*.

It will also integrate the five principles of the program: problem solving, visual learning, differentiated instruction, interactive learning, and digital instruction. The following pages will provide a walkthrough of the 5-step lesson structure.

5-STEP LESSON STRUCTURE

- 1 Interactive Learning
- 2 Guided Instruction
- 3 Lesson Check
- 4 Practice
- 5 Assess and Remediate

CORE COMPONENTS

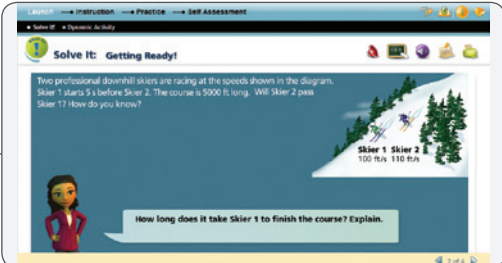
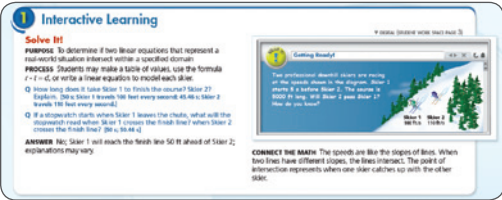
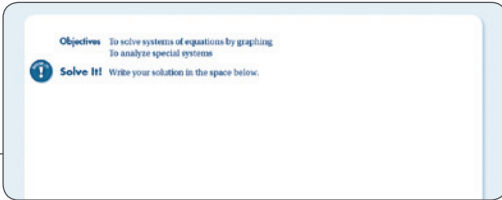


STUDENT WORKTEXT

TEACHER'S GUIDE

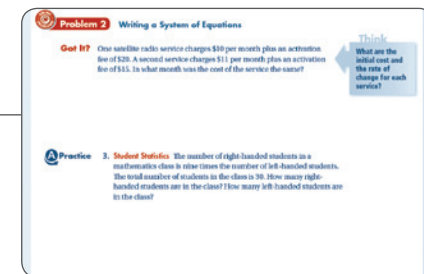
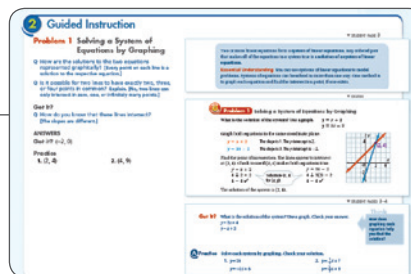
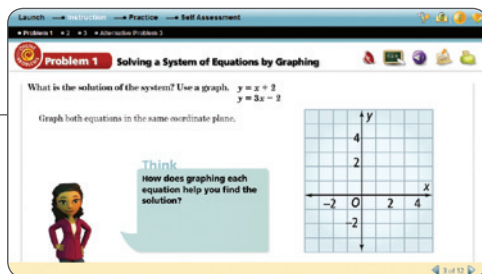
PEARSONSUCCESSNET.COM
OR DIGITAL LESSON DVD

Every lesson begins with problem-based interactive learning. Through the **Solve It!**, at the beginning of every lesson, teachers can activate students' prior knowledge and set the context for the **Essential Understanding** for the lesson. Students work through the real world problem, by first making sense of the problem, and then analyzing the situation, making solution plans, and presenting and justifying their answers to the class. This **Interactive Learning** experience develops multiple mathematical practices as students are actively involved in doing mathematics. Students interact with these concepts as they work individually or collaboratively to find a solution to the problem.

PEARSONSUCCESSNET.COM OR DIGITAL LESSON DVD	TEACHER'S GUIDE	STUDENT WORKTEXT
<ul style="list-style-type: none"> • Every lesson within the Interactive Digital Path begins with an animated Solve It! activity. • LCD projectors or Interactive Whiteboards can be used to present the digital lesson content. • Some lessons include a Dynamic Activity. These animated activities can help students understand important math concepts. 	<ul style="list-style-type: none"> • The Preparing to Teach section includes the following resources to support instruction: <ul style="list-style-type: none"> - Big Ideas - Essential Understandings - Math Background - ELL Support - Lesson Vocabulary - Dynamic Activity • In the right column, the image of the Solve It! from the digital courseware simplifies planning for teachers. All necessary teaching notes to facilitate the lesson are in the left column. 	<ul style="list-style-type: none"> • Within the Student Worktext, space is provided for students to complete the Solve It! • The Solve It! can be assigned as a whole class, small group, or individual activity. • The worktext becomes the students' personal record of their mathematics learning over the course of the school year 

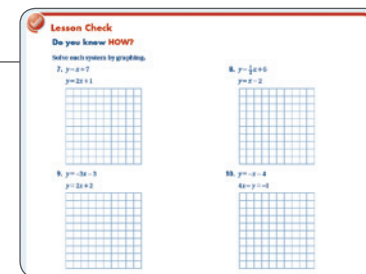
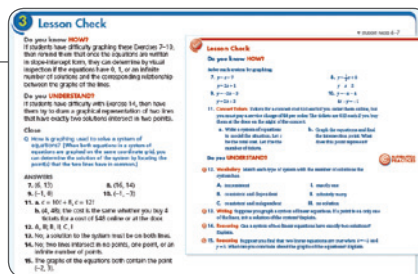
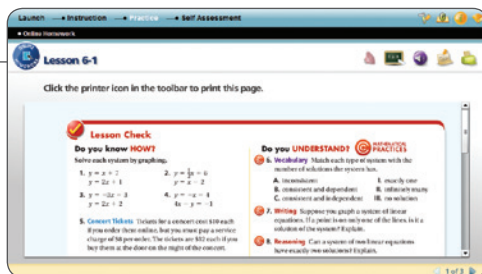
The **Guided Instruction** phase of the lesson begins with the **Essential Understanding** in which the focus of study for the lesson is formalized. An interwoven strand of reasoning connects the math that students learn, from the first lesson to the last, further supporting both the **Common Core Standards for Math Content** and the **Standards for Mathematical Practice**. Probing questions in the **Think and Plan** boxes model for students the thinking embraced by the mathematical practices. These prompts become less structured as students advance through the program and become more mathematically proficient.

PEARSONSUCCESSNET.COM OR DIGITAL LESSON DVD	TEACHER'S GUIDE	STUDENT WORKTEXT
<ul style="list-style-type: none"> The Instruction phase of the lesson guides students through problems aligned to the Common Core Standards for Math Content with step-by-step solutions. The lesson window provides ample white space for illustration. The space allows teachers to use interactive whiteboards and writing tools to draw additional examples, add emphasis, and provide notes. Interactive math tools not only support and extend what's taught in the lesson but also aid in the development of the Standards for Mathematical Practice. 	<ul style="list-style-type: none"> The supporting questions that accompany all problems help teachers to facilitate the lesson, connect to the Standards for Mathematical Practice, and guide students to understanding and more in-depth reasoning. Through the use of these scaffolding questions, students develop sound arguments to explain their solution plans and become more proficient in constructing viable arguments. 	<ul style="list-style-type: none"> There is ample space for students to complete the Got It? problems that follow each worked out problem from the Interactive Digital Path. Students benefit in two ways from this process of working out solutions and recording processes. Students are actively engaged in the production of the solution, and the recording of their understandings becomes contextualized within a specific event, providing retrieval cues.



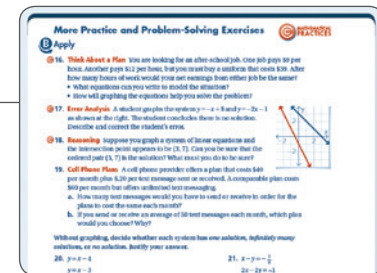
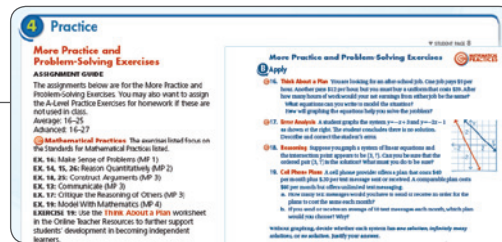
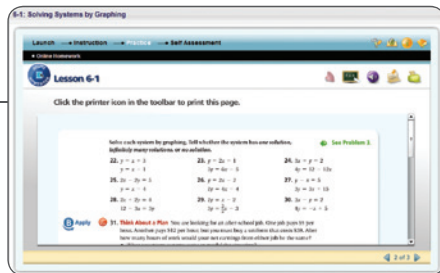
The **Lesson Check** presents timely opportunities for assessing students' understanding of the lesson content. The questions in **Do you know HOW?** assess students' procedural fluency with the concept presented in the lesson while the questions in **Do you UNDERSTAND?** focus on students' conceptual understanding of the concepts. Most of the tasks in the **UNDERSTAND** part of this assessment elicit the use of one or more **Common Core Standards for Mathematical Practice**. Higher order thinking skills, such as Reasoning, Compare and Contrast, and Error Analysis, focus students' attention on structure and meaning rather than on the solution.

PEARSONSUCCESSNET.COM OR DIGITAL LESSON DVD	TEACHER'S GUIDE	STUDENT WORKTEXT
<ul style="list-style-type: none"> Teachers and students can view the Lesson Check digitally within the Interactive Digital Path. Additional teacher resources are available to support every lesson: <ul style="list-style-type: none"> - Reteaching - ELL Support - Enrichment - Problem Solving - Practice - Test Prep - Teaching with TI Technology - Find the Errors - Activities, Games, and Puzzles 	<ul style="list-style-type: none"> Within the Teacher's Guide, specific support is provided for students who may struggle with the Lesson Check. At the end of each lesson, the question in the Close encourages students to express verbally or in writing their understanding of the concepts presented. 	<ul style="list-style-type: none"> Within the Student Worktext, space is provided for students to complete the Lesson Check. Teachers can review these questions in class or assign for independent practice. For students in need of additional support, instructional summaries of the concepts presented (Take Note and Essential Understanding boxes) can serve as reminders of the day's lesson.



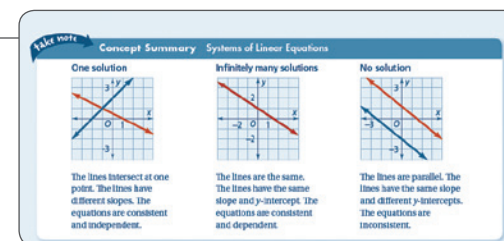
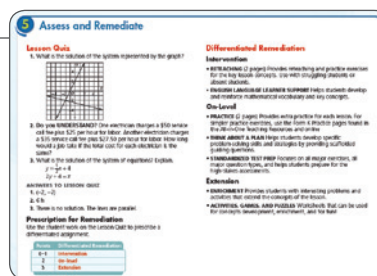
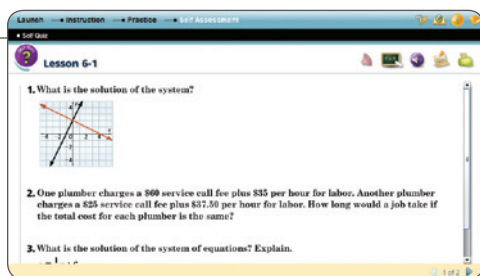
The **Practice** phase affords students opportunities to solidify their procedural fluency and conceptual understanding of the lesson content. These exercises are comprised of three different levels: practice, application and challenge problems. The exercises with the Common Core logo help students become more proficient with the **Standards for Mathematical Practice**. The **Application** exercises require students to develop mathematical models for real world problem situations. **Application** exercises with the STEM label present real-world problem situations related to science, technology, or engineering topics.

PEARSONSUCCESSNET.COM OR DIGITAL LESSON DVD	TEACHER'S GUIDE	STUDENT WORKTEXT
<ul style="list-style-type: none"> Teachers and students can view the More Practice and Problem Solving Exercises digitally within the Interactive Digital Path. Students can access digital content to support in-class instruction: <ul style="list-style-type: none"> Interactive eText with linked videos, vocabulary, and lesson resources Dynamic Activities and Math Tools Online glossary with audio in English and Spanish Homework Video Tutors in English and Spanish MathXL® for School—unlimited practice tutorials with instant feedback 	<ul style="list-style-type: none"> After the Lesson Check, teachers can assign a series of practice problems. The Teacher's Guide provides a variety of leveled assignments to meet the needs of all students. All answers are provided at point of use. The Homework Quick Check saves teachers time by suggesting which problems to check the next day for a quick review of key skills. The practice problems that correspond to a specific Standard for Mathematical Practice are also documented in the Teacher's Guide. 	<ul style="list-style-type: none"> After completing the Got It? in class, students can use these worked out examples in the Student Worktext as a reference when completing independent practice or homework exercises. For students in need of additional support or remediation, they will find a web link to the digital courseware in the worktext where they can revisit the day's lesson. For each lesson, they will also find a QR code that, when scanned, will present video tutorials of the concepts addressed in the lesson.

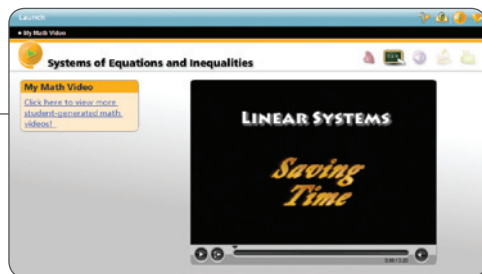


The final phase of the lesson is **Assess and Remediate**. Each lesson ends with a **Lesson Quiz** (available within the printed Teacher's Guide and online within the Teaching Resources) and opportunities to provide differentiated instruction for students. The Teacher's Guide also includes personalized prescriptions for remediation based on a student's **Lesson Quiz** results. This enables teachers to make data-driven instructional decisions about review assignments for intervention, on-level, and extension.

PEARSONSUCCESSNET.COM OR DIGITAL LESSON DVD	TEACHER'S GUIDE	STUDENT WORKTEXT
<ul style="list-style-type: none"> Teachers can view the quiz from the online Teacher's Guide posted on Pearson SuccessNet®. Additional assessment resources are posted within the Teaching Resources link. Teachers also have the option of assigning tests and quizzes online via SuccessTracker. Each online assessment is automatically scored and the appropriate intervention is automatically assigned to each student based on individual student performance. The compiled data appears in three different reports making it easier for teachers to analyze whole class and individual student performance. 	<ul style="list-style-type: none"> The Lesson Quiz, also available as a PDF, assesses lesson skills and concepts. The Prescription for Remediation helps teachers use the quiz results to make instructional decisions about appropriate review assignments. A complete list of resources is available for intervention, on-level, and extension. These review assignments are also available on Pearson SuccessNet. 	<ul style="list-style-type: none"> The Lesson Quiz is not provided in the Student Worktext. Students can access a self-assessment for each lesson digitally via the Interactive Digital Path. The worktext helps students stay organized and provides a resource for students to review vocabulary, key concepts, formulas, properties and worked out exercises. Features such as the Take Note and Key Concept boxes can be used when preparing for assessments.



PEARSONSUCCESSNET.COM OR DIGITAL LESSON DVD	TEACHER'S GUIDE	STUDENT WORKTEXT
<p>My Math Video</p> <p>Every chapter begins with a My Math Video. This video provides students with a real-world application of the chapter topics. After students watch the video, consider discussing how the video relates to the chapter topics.</p> <p>Other resources include:</p> <ul style="list-style-type: none"> • Online Lesson Planner • Editable Teaching Resources • Editable Assessment Resources • Online Assessment System • Classroom Management System 	<p>Get Ready!</p> <p>Within the Teacher's Guide, the Get Ready! diagnostic assessment appears on the first page of every chapter. Teachers can use the assessment to determine if students have the prerequisite skills for the chapter.</p> <p>Chapter Overview</p> <p>The chapter overview contains everything needed to help teachers prepare to teach a chapter such as, an overview of the Big Ideas and Essential Questions, correlation to the Common Core State Standards, and Chapter Vocabulary.</p> <p>Math Background</p> <p>The Math Background page provides ongoing professional development that clarifies the chapter Big Ideas and Essential Understandings. It provides an explanation of key concepts along with a description of common errors.</p>	<p>Get Ready!</p> <p>The Get Ready! diagnostic assessment appears on the first page of every chapter within the Student Worktext. The Get Ready! is also available as an online assessment on Pearson SuccessNet. The assessment is automatically scored and students receive instant remediation or enrichment based on individual assessment results.</p> <p>Chapter Opener</p> <p>The Chapter Opener in the Student Worktext includes a list of the Big Ideas and Essential Questions for the chapter, a list of the Common Core Domains, a Chapter Preview, and the Chapter Vocabulary.</p>



Get Ready!

Using This Diagnostic Assessment
Assign this diagnostic assessment to determine if students have the prerequisite skills for Chapter 6.

Lesson	Skill
2-4	Solving Equations
2-8	Solving Inequalities
4-8	Writing Functions
5-3, 5-4, and 5-5	Graphing Linear Equations

To remediate students, select from these resources (available for every lesson):

- Online Problems (pearsonsuccessnet.com)
- Reteaching (All-in-One Teaching Resources)
- Practice (All-in-One Teaching Resources)

Why Students Need These Skills

SOLVING EQUATIONS Solving equations will be extended to systems of equations.

SOLVING INEQUALITIES Students will graph and solve systems of linear inequalities.

WRITING FUNCTIONS Students write functions to solve real-world systems of equations.

GRAPHING LINEAR EQUATIONS Students will solve systems of equations by graphing.

Looking Ahead Vocabulary

INCONSISTENT Ask students to give real-world examples of situations that are inconsistent.

CONSISTENT Ask students to give real-world examples of situations that are consistent.

ELIMINATED Ask students what it means to be eliminated.

CHAPTER 6

Get Ready!

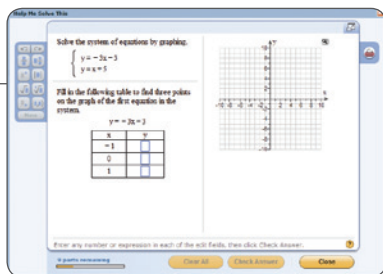
Solving Equations
Solve each equation. If the equation is an Identity, write *identity*. If it has no solution, write *no solution*.

1. $3x - 2x = -4(x - 1)$ 2. $3p + 1 = -p + 5$ 3. $4x - 1 = 3(x + 1) + x$
 4. $\frac{1}{2}(6x - 4) = 4 + x$ 5. $6x = 2 - (x - 7)$ 6. $p + 5 = p - 5$

Solving Inequalities
Solve each inequality.

7. $6x + 3 < 38$ 8. $-\frac{5}{2} + 1 \geq -6$ 9. $-3t - 5 < 34$
 10. $-(7f + 10) - 2f \geq 0$ 11. $6u + 7 > -3(5u - 4)$ 12. $\frac{1}{3}(x + 6) + 1 \leq -5$

PEARSONSUCCESSNET.COM	TEACHER'S GUIDE	STUDENT WORKTEXT
<p>MathXL® for School</p> <p>MathXL® for School provides unlimited practice and remediation with tutoring and guided assistance at the mid-chapter and end of chapter. Most problems are short answer and require students to actually “do the math.” Each problem regenerates to a new problem, so students have unlimited practice opportunities.</p> <p>Other resources include:</p> <ul style="list-style-type: none"> • Online Lesson Planner • Editable Teaching Resources • Editable Assessment Resources • Online Assessment System • Classroom Management System 	<p>Pull It All Together</p> <p>The Pull It All Together performance tasks provide an opportunity for students to demonstrate their ability to use reasoning to solve real-world problems. The teacher is provided guiding questions to support students’ understanding of the task. A rubric is found in the Implementation Guide.</p> <p>Chapter Review</p> <p>The Chapter Review summarizes the Big Ideas and answer the Essential Questions. The teacher is also provided with additional Summative Questions to assess students’ understanding of the Big Ideas.</p>	<p>Pull It All Together</p> <p>The Pull It All Together performance tasks are included in the Student Worktext. These rich, real-world performance tasks are designed to reflect the performance tasks that students are likely to encounter on the Next Generation Assessments currently under development.</p> <p>Chapter Review</p> <p>The Chapter Review in the Student Worktext includes a Quick Review and Example for each lesson of the chapter. Corresponding exercises are also provided for each lesson.</p>



The following pages provide a walkthrough of the digital components found on Pearson SuccessNet.



The screenshot shows the Pearson SuccessNet login interface. At the top left is the Pearson SuccessNet logo, a colorful star-like shape. To its right, the text reads "Pearson SuccessNet" in a large serif font, followed by "Your Personalized Path to Classroom Success" in a smaller blue serif font. Below this, instructions state: "To log in, enter your user name and password and click on the log in button below. The user name and password fields are case sensitive." There are two input fields: "User name:" followed by a text box and a blue link "Forgot your Username?"; and "Password:" followed by a text box and a blue link "Forgot your password?". Below the password field is a "Log in" button. Further down, text says "To get your user name and password, register using your access code." with a "Register" button below it. At the bottom, it says "Assessments Powered by Success Tracker™" with the Success Tracker logo.

- 1 Go to **PearsonSuccessNet.com**.
- 2 Enter the User name and Password.
User name: **INTHSMath**
Password: **pearsonCCSS1**
- 3 Click **Log in**.

2. Your Home Page

ONLINE DIGITAL WALKTHROUGH



- 1 Access the **Interactive Digital Path** by clicking Interactive Digital Path. The Digital Path is the gateway to all digital components of the program.
- 2 Access your **Interactive Student Worktext, Teacher's Guide, and Teacher Resources** from links beneath each book image. Multiple courses can be accessed through the same home page. The **Student Worktext** and **Teacher's Guide** are also accessible on a mobile device (iPad/Android).

3. Navigating Teacher Resources

ONLINE DIGITAL WALKTHROUGH

Access your online **Teacher Resources** through the home page. Many resources are available in editable format.

The screenshot shows the 'Mathematics I Teacher Resources' page. A pull-down menu is open, listing chapters from 1 to 11. A yellow circle with the number '2' points to the chapter list. Below the menu, the 'Chapter 3: Solving Inequalities' section is expanded, showing various resources like 'Zipped PDF and Editable Resources', 'Student Companion', and 'Practice Form G (Editable)'. A yellow circle with the number '3' points to the 'Lesson 3-1 Practice Form G (Editable)' link. To the right, a preview of the '3-1 Practice' worksheet is shown, featuring a title bar with 'Name', 'Class', and 'Date' fields, and a list of verbal expressions to be converted into inequalities.

The screenshot shows the 'Mathematics I' home page navigation menu. It includes links for 'Interactive Digital Path', 'Teacher's Guide', 'Student Worktext', and 'Other Resources'. A yellow circle with the number '1' is placed next to the 'Other Resources' link.

- 1 Select **Other Resources** from the home page, then click on the **Teacher Resources** link from the pull-down menu.
- 2 Click on the chapter.
- 3 Choose the resource and lesson.
- 4 Save and open to edit.

4. Navigating the eText

Access your online **Student Worktext** and **Teacher's Guide** through the home page. The Student eText contains links to lesson tutorial videos, vocabulary, and other resources.

PEARSON Welcome Teacher Account Algebra 1 Settings Help Sign Out

Browse My Searches Go Instructor View

Page 254 71%

6-1 Solving Systems by Graphing

Objectives To solve systems of equations by graphing
To analyze special systems

Solve It! Write your solution in the space below.

Two or more linear equations form a **system of linear equations**. Any ordered pair that makes all of the equations in a system true is a **solution of a system of linear equations**.

Essential Understanding You can use systems of linear equations to model problems. Systems of equations can be solved to answer those real-world problems. One method is to graph each equation and find the intersection point, if one exists.

Problem 1 Solving a System of Equations by Graphing

Get It? What is the solution of the system? Use a graph. Check your answer.
 $y = 2x + 3$
 $y = x + 2$

Practice Solve each system by graphing. Check your solution.

1. $y = 2x$
 $y = -2x + 8$

2. $y = \frac{1}{2}x + 7$
 $y = \frac{3}{4}x + 3$

Problem 2 Writing a System of Equations

Get It? One satellite radio service charges \$10 per month plus an activation fee of \$20. A second service charges \$15 per month plus an activation fee of \$35. In what month was the cost of the service the same?

Student Statistics The number of right-handed students in a mathematics class is nine times the number of left-handed students. The total number of students in the class is 36. How many right-handed students are in the class? How many left-handed students are in the class?

Flare! A plant nursery is growing a tree that is 3 ft tall and grows at an average rate of 1.8 ft per year. Another tree at the nursery is 6 ft tall and grows at an average rate of 0.8 ft per year. After how many years will the trees be the same height?

Lesson 6-1 Solving Systems by Graphing 3

4 Chapter 6 Systems of Equations and Inequalities

Mathematics I

[Interactive Digital Path](#)

[Teacher's Guide](#)

[Student Worktext](#)

[Other Resources](#)

- 1 Select the **Student Worktext** or **Teacher's Guide** link from the home page.
- 2 Lesson tutorial videos, vocabulary, and other resources are linked at point of use.

5. Navigating Interactive Digital Path

ONLINE DIGITAL WALKTHROUGH

Access the **Interactive Digital Path** from your homepage. The Digital Path contains all the interactive chapter and lesson content.

Mathematics I

Mathematics I Mathematics II Mathematics III

Table of Contents

Chapter	Chapter
1	Chapter 1: Foundations for Algebra
2	Chapter 2: Solving Equations
3	Chapter 3: Solving Inequalities
4	Chapter 4: An Introduction to Functions
5	Chapter 5: Linear Functions
6	Chapter 6: Systems of Equations and Inequalities
7	Chapter 7: Exponents and Exponential Functions
8	Chapter 8: Data Analysis

Mathematics I

- [Interactive Digital Path](#)
- [Teacher's Guide](#)
- [Student Worktext](#)
- [Other Resources](#)

1 Select **Interactive Digital Path** from the home page.

2 Choose a Chapter.

3 Choose a Lesson.

4 Choose from the menu to **View** the lesson, **Assign** it to your students, find **Information**, such as Common Core Standards or add it to your **Lesson Planner**.

Mathematics I

Mathematics I Mathematics II Mathematics III

Table of Contents

Chapter 6 > Lesson

Chapter 6 My Math Video	
Chapter 6 Virtual Nerd™ Video Tutorial	
6-1: Solving Systems by Graphing	View Assign Information Teacher's Edition Add to Planner
6-2: Solving Systems Using Substitution	
6-3: Solving Systems Using Elimination	
6-4: Applications of Linear Systems	
Chapter 6 MathXL: Mid-Chapter Practice and Review	

6. Digital Path Solve It!

ONLINE DIGITAL WALKTHROUGH

The **Solve It!** starts off the lesson by presenting a problem that helps connect what students know to an important concept in the lesson. Student have space in the Student Worktext to complete the activity.

Mathematics I

Mathematics I Mathematics II Mathematics III

Table of Contents

Chapter 6 > Lesson

- Chapter 6 My Math Video
- Chapter 6 Virtual Nerd™ Video Tutorial
- 6-1: Solving Systems by Graphing
- 6-2: Solving Systems Using Substitution
- 6-3: Solving Systems Using Elimination
- 6-4: Applications of Linear Systems
- Chapter 6 MathXL: Mid-Chapter Practice and Review

View
Assign
Information
Teacher's Edition
Add to Planner

- 1 Choose a lesson and click **View**.
- 2 The lesson opens up to the **Solve It!**
- 3 Use the arrows at the bottom of the screen to move through the **Solve It!**

6-1: Solving Systems by Graphing

Launch — Instruction — Practice — Self Assessment

• Solve It! • Dynamic Activity

Solve It: Getting Ready!

Two professional downhill skiers are racing at the speeds shown in the diagram. Skier 1 starts 5 s before Skier 2. The course is 5000 ft long. Will Skier 2 pass Skier 1? How do you know?

Skier 1 100 ft/s Skier 2 110 ft/s

How long does it take Skier 1 to finish the course? Explain.

2 of 4

7. Digital Path Dynamic Activity

ONLINE DIGITAL WALKTHROUGH

The **Dynamic Activity** is a virtual manipulative with guided instruction. There are over 90 different **Dynamic Activities** in this program. Another way to access the **Dynamic Activities** is to use the Search function found within the Content tab.

6-1: Solving Systems by Graphing

Launch → Instruction → Practice → Self Assessment

• Solve It! • Dynamic Activity

Solving Linear Systems by Graphing

Section: **1** **II**

Question: **1** **2** **3** **4**

Graphing a System of Equations

In this section, you will explore the graph of a system of linear equations and find the solution(s) of the system.

On the **Standard** tab, select the first equation and set $a = 2$, $b = -4$, and $c = -6$ by using the sliders or by

Click **Next** to continue.

3

2

Standard | Slope-Intercept | Table

$ax + by = c$

$-x + 3y = -4$

$-2x + y = 2$

a

Show solution test

$-x + 3y = -4$

$-1(1.00) + 3(1.00) = -4$
 $2 \neq -4$ ✗

$-2x + y = 2$

$-2(1.00) + 1(1.00) = 2$
 $-1 \neq 2$ ✗

Graph Window

<input type="text" value="-9.00"/>	<input type="text" value="9.00"/>	<input type="text" value="-9.00"/>	<input type="text" value="9.00"/>
x-Min	x-Max	y-Min	y-Max

(1.00, 1.00) is not a solution to either of the equations.

- 1** Select **Dynamic Activity** under Launch. (Note: **Dynamic Activities** are only available for select lessons.)
- 2** Click **Next** to advance through the guided instruction.
- 3** Check open boxes to display more data.
- 4** Manipulate the interactive graphs to explore lesson concepts.

8. Digital Path Instruction

ONLINE DIGITAL WALKTHROUGH

The **Instruction** phase of the lesson guides students through problems with step-by-step solutions. As teachers and students work through the problems, students record their understandings in the Student Worktext.

The top screenshot shows the 'Instruction' phase of a lesson titled '6-1: Solving Systems by Graphing'. It features a navigation bar with 'Launch', 'Instruction', 'Practice', and 'Self Assessment'. Below this is a problem list with 'Problem 1', '2', '3', and 'Alternative Problem 3'. The main content area displays the problem: 'What is the solution of the system? Use a graph. $y = x + 2$, $y = 3x - 2$ '. It asks to graph both equations in the same coordinate plane and includes a 'Think' box with an avatar and text explaining that the intersection point is a solution of both equations. A coordinate plane is shown with x and y axes ranging from -2 to 4. A '4 of 12' indicator is at the bottom right.

The bottom screenshot shows the 'Got It?' section of the same problem. It contains a word problem: 'One satellite radio service charges \$10 per month plus an activation fee of \$20. A second service charges \$11 per month plus an activation fee of \$15. For what number of months is the cost of either service the same?'. The answer 'B. 5 months' is displayed. At the bottom, there are buttons for 'Show Answer Choices', 'Hide Correct Answer', and 'Show Solution Page', along with a '12 of 12' indicator.

- 1 Click on **Instruction** to move to the animated problems.
- 2 Click on a problem to begin. Use the audio icon to turn off the avatar's voice when needed.
- 3 **Alternative Problems**, when available, provide opportunity to differentiate instruction.
- 4 Click on the arrows to guide through the problem at your own pace. You can go back to steps at any time to review.
- 5 Each problem ends with **Got It?**, a built in check for understanding. Use the buttons at the bottom to display answer choices, correct answer and full stepped out solution. There is space in the Student Worktext for students to complete the **Got It?** exercise.

Students will find lesson practice exercises online under **Practice** as shown below. Lesson **Practice** exercises are also available within the Student Worktext.

6-1: Solving Systems by Graphing

Launch → Instruction → **Practice** → Self Assessment

• Online Homework

Lesson 6-1

Click the printer icon in the toolbar to print this page.

Solve each system by graphing. Tell whether the system has *one solution*, *infinitely many solutions*, or *no solution*. [See Problem 3.](#)

22. $y = x + 3$ $y = x - 1$	23. $y = 2x - 1$ $3y = 6x - 5$	24. $3x + y = 2$ $4y = 12 - 12x$
25. $2x - 2y = 5$ $y = x - 4$	26. $y = 2x - 2$ $2y = 4x - 4$	27. $y - x = 5$ $3y = 3x + 15$
28. $2x + 2y = 4$ $12 - 3x = 3y$	29. $2y = x - 2$ $3y = \frac{3}{2}x - 3$	30. $3x - y = 2$ $4y = -x + 5$

B Apply **31. Think About a Plan** You are looking for an after-school job. One job pays \$9 per hour. Another pays \$12 per hour, but you must buy a uniform that costs \$39. After how many hours of work would your net earnings from either job be the same?

◀ 2 of 3 ▶

- 1 Click on **Practice** for access to the online homework.
- 2 Click on **Math Tools** to activate graphing tools (more on page 27).
- 3 **Print** this page.
- 4 Click on **Key Concepts** for help when completing homework.
- 5 **Vocabulary** provides math definitions in English and Spanish, in print and read aloud (more on page 26).

10. Digital Path Assessment

ONLINE DIGITAL WALKTHROUGH

Students can test their knowledge using the Self Quiz for each lesson.

6-1: Solving Systems by Graphing

Launch — Instruction — Practice — Self Assessment

Self Quiz

Lesson 6-1

1. What is the solution of the system?

2. One plumber charges a \$60 service call fee plus \$35 per hour for labor. Another plumber charges a \$25 service call fee plus \$37.50 per hour for labor. How long would a job take if the total cost for each plumber is the same?

3. What is the solution of the system of equations? Explain.

1 of 2

1 Click on **Self Assessment** to open the Lesson Self Quiz.

2 Use the questions as a quick check for understanding.

3 Click on the forward arrow to get responses for each question.

6-1: Solving Systems by Graphing

Launch — Instruction — Practice — Self Assessment

Self Quiz

Lesson 6-1

1. What is the solution of the system?

(0, 2)

2. One plumber charges a \$60 service call fee plus \$35 per hour for labor. Another plumber charges a \$25 service call fee plus \$37.50 per hour for labor. How long would a job take if the total cost for each plumber is the same?

14 h

2 of 2

Vocabulary provides math definitions in English and Spanish, in writing and read aloud.

6-1: Solving Systems by Graphing

Launch → Instruction → Practice → Self Assessment

Problem 1 • 2 • 3 • Alternative Problem 3

Problem 1 Solving a System of Equations by Graphing

What is the solution of the system? Use a graph. $y = x + 2$
 $y = 3x - 2$

2

Lesson Vocabulary

Select a Language English Expand All Collapse All

▼ **System of linear equations**
Two or more linear equations using the same variables.
Example $y = 5x + 7$
 $y = \frac{1}{2}x - 3$

▶ **Solution of a system of linear equations**

▶ **Consistent system**

▶ **Independent system**

▶ **Dependent system**

3

Lesson Vocabulary

Select a Language Spanish Expand All Collapse All

▼ **Sistema de ecuaciones lineales**
Dos o más ecuaciones lineales que usen las mismas variables.

▶ **Solución de un sistema de ecuaciones lineales**

▶ **Sistema consistente**

▶ **Sistema independiente**

▶ **Sistema dependiente**

▶ **Sistema incompatible**

1

Click on **Vocabulary** for lesson vocabulary definitions.

2

Click on the arrow to view the definition and see an example.

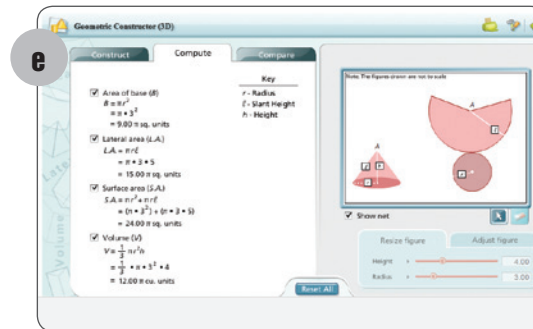
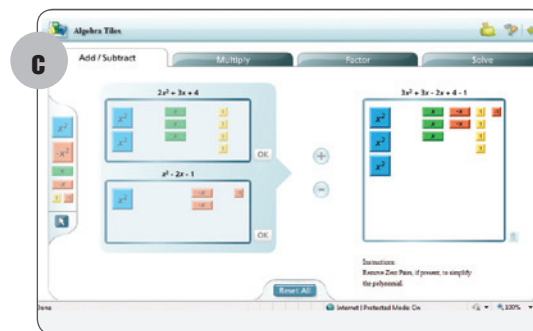
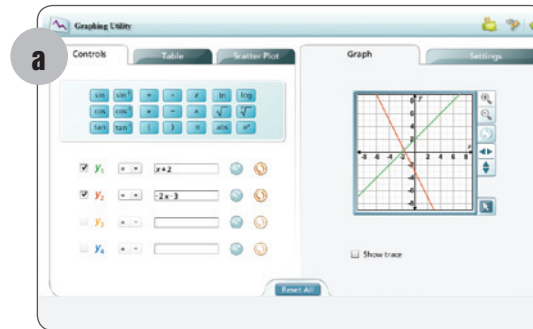
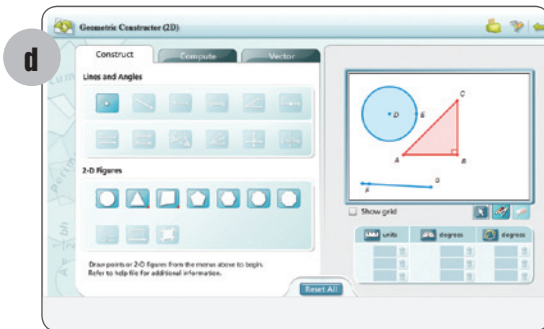
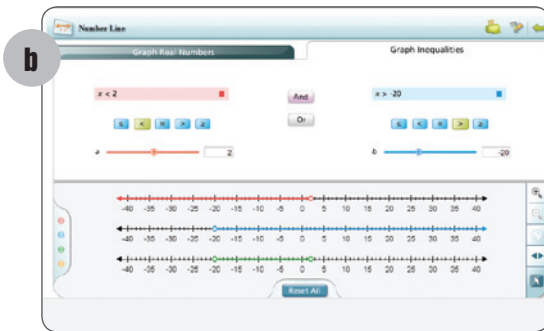
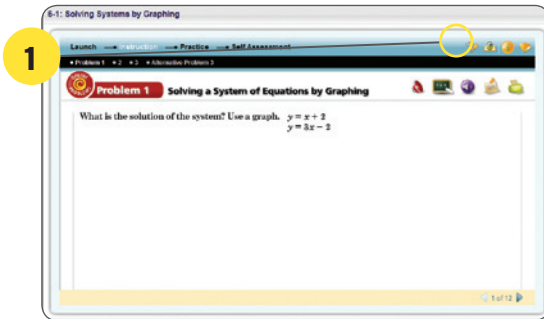
3

Click on the speaker to hear the term and definition.

4

Select **Spanish** for vocabulary definition and audio in Spanish.

Math Tools help students explore and visualize concepts digitally.



1 Click on **Math Tools**  for access to all 5 tools:

a **Graphing Utility:** Graph points, relations, functions, and inequalities on a coordinate plane.

b **Number Line Tool:** Add real numbers, graph inequalities on a number line, and plot real numbers and their opposites.

c **Algebra Tiles Tool:** Add, subtract, multiply, factor and solve one-step equations using algebra tiles.

d **2-D Geometric Constructor Tool:** Graph points, segments, lines, angles, rays and polygons. Measure the perimeter and area of polygons.

e **3-D Geometric Constructor Tool:** Graph 3-D figures and compute their surface area and volume.

Mathematics I

Mathematics I Mathematics II Mathematics III

Table of Contents

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- 6-2: Solving Systems Using Substitution
- 6-3: Solving Systems Using Elimination
- 6-4: Applications of Linear Systems

Solve for x

1 Group $15 + 6x = 45 + 8x$

$$\begin{array}{r} 15 + 6x = 45 + 8x \\ -6x \quad -6x \\ \hline 15 = 45 + 2x \\ -45 \quad -45 \\ \hline -30 = 2x \end{array}$$

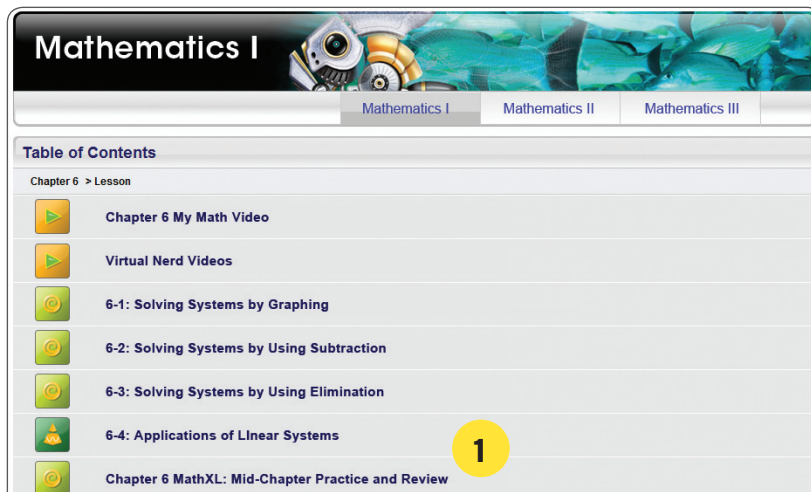
01:08 03:01

Mathematics I

- [Interactive Digital Path](#)
- [Teacher's Guide](#)
- [Student Worktext](#)
- [Other Resources](#)

- 1 Select **Interactive Digital Path** from the home page.
- 2 Choose a chapter.
- 3 Students can scan the QR code in their Student Worktext or choose **Virtual Nerd™ Videos** from the Table of Contents within the digital path to access Virtual Nerd tutorial videos that directly relate to the content in the lesson. (To learn more about Virtual Nerd tutorial videos and the exclusive dynamic whiteboard go to virtualnerd.com.)

MathXL® for School exercises provide additional practice at the middle and end of every chapter and are accessible from the Chapter Table of Contents.



1 From the Table of Contents, select **MathXL® for School Mid-Chapter or End-of-Chapter Practice and Review.**

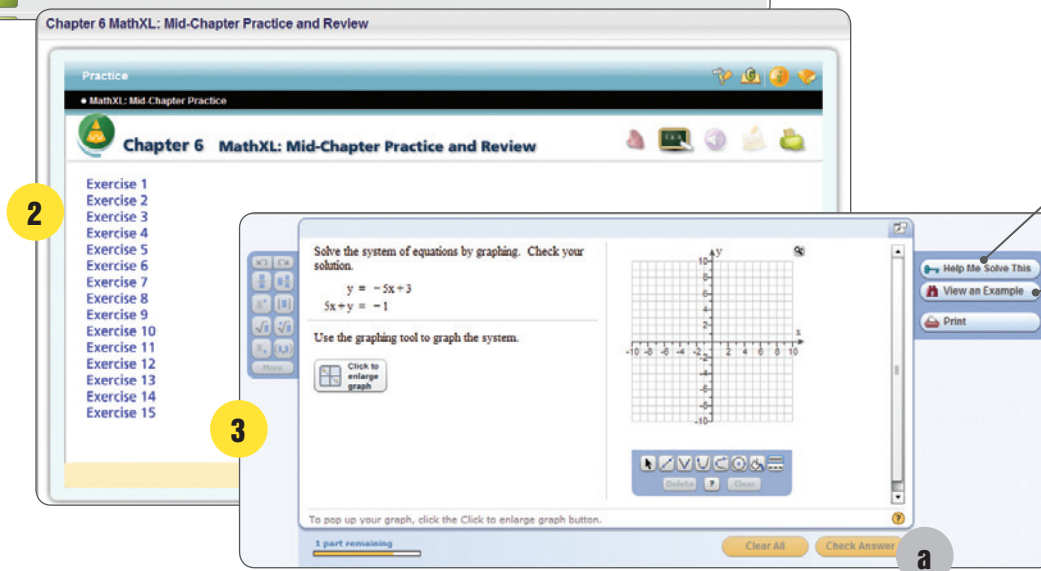
2 Click on the link to each exercise.

3 There are three options once a problem is started:

a Work through the problem and receive immediate feedback.

b Help Me Solve This—an interactive tutorial.

c View an Example.



15. Lesson Planning

ONLINE DIGITAL WALKTHROUGH

The **Online Lesson Planner** saves you time and helps you align your lessons to the **Common Core State Standards**.


The screenshot shows the Pearson SuccessNet Online Lesson Planner interface. The navigation bar includes 'Home', 'Content', 'Planning', 'Classes', and 'Reports'. The 'Lesson Planner' section has tabs for 'Month', 'Week', and 'Day'. A calendar for May 2012 is displayed, showing lesson plans for various days. A sidebar on the left lists lesson plans for Mathematics I, II, and III. A yellow circle with the number 5 is placed over the 'Lesson Plans' sidebar. A yellow circle with the number 1 is placed over the 'Month' tab. A yellow circle with the number 2 is placed over the 'Auto Scheduling' icon. A yellow circle with the number 3 is placed over the 'Lesson Plans' sidebar. A yellow circle with the number 4 is placed over the 'Set Up' icon. A yellow circle with the number 5 is placed over the 'Lesson Plans' sidebar.

1 View lesson plans by **month, week, or day**.

2 You can auto schedule lesson plans for the entire year, including days to block out.

3 Easily click and drag **Lesson Plans** into the **Lesson Planner Calendar**.

4 View multiple classes at the same time.

5 Choose  to access a blank lesson template and create a Custom Lesson Plan.

16. Lesson Planning

ONLINE DIGITAL WALKTHROUGH

View/Edit **Lesson Plans** and save them into the calendar.

Edit Lesson Plan

Lesson Planner > View Lesson Plan > Edit Lesson Plan

Solving Systems Using Substitution

Objective	Materials	Pacing
To solve systems of equations using substitution		Standard 2 days Block 1 day

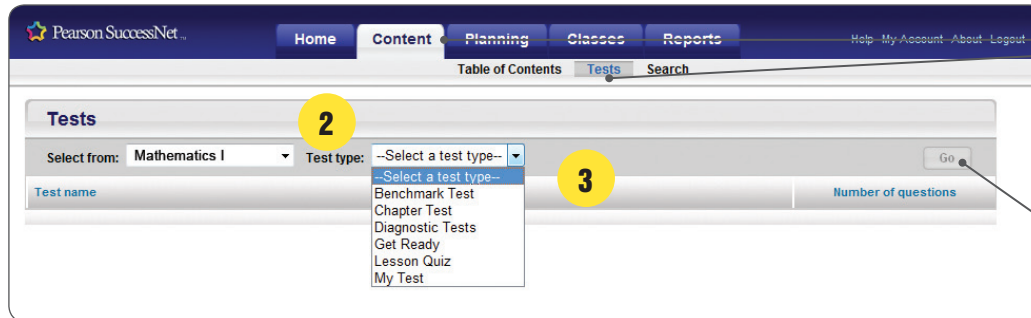
National Standards [Add a Standard](#)

MCC.A.REI.6 Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables.

Interactive Learning and Guided Instruction	Targeted Resources Add a Link or File	Duration
Lead the students through the Solve It! problem at the beginning of the lesson. Use the suggestions in the Online Teacher's Edition to guide the	Problem, Lesson 6-2 Visible	30 minutes
	Problem, Lesson 6-2 Problem 1 Visible	
	Problem, Lesson 6-2 Problem 2 Visible	
	Problem, Lesson 6-2 Problem 3 Visible	
	Problem, Lesson 6-2 Problem 4 Visible	
	Problem, Lesson 6-2 Alternative Problem 2 Visible	
	Problem, Lesson 6-2 Alternative Problem 4 Visible	
	Lesson 6-2 Teacher's Edition Visible	
	Lesson 6-2 Activities, Games, and Puzzles Visible	

- 1 Create a new lesson plan or edit an existing lesson plan.
- 2 **Add** or **Remove** Common Core Standards.
- 3 Hide lesson resources that will not be used.
- 4 Links to digital content and print content embedded into lesson plans.

Pre-loaded **Progress Monitoring Assessments** save time and allow the teacher to quickly assign online assessments to students that are already aligned to the text and to the **Common Core State Standards**.

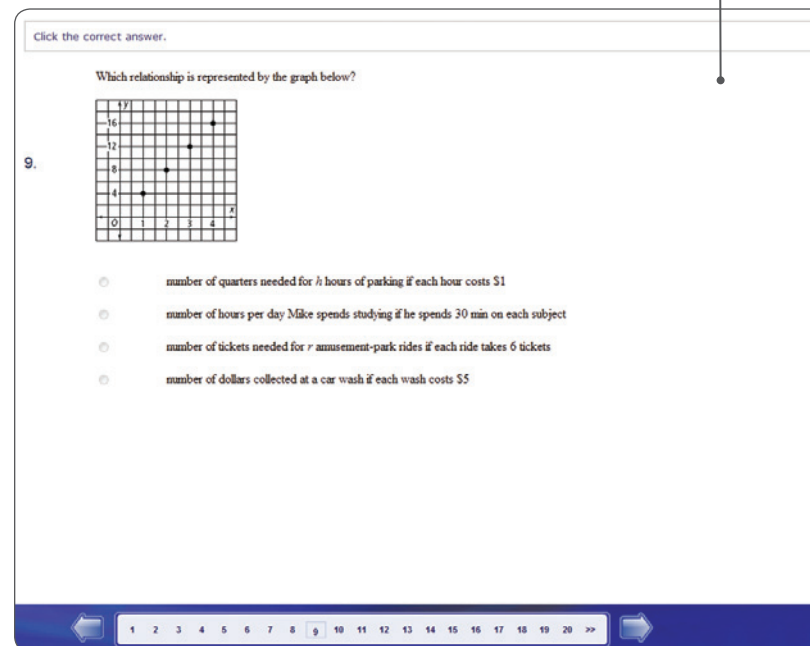


1 Select **Content** and **Tests**.

2 Select your course.

3 Select your assessment.

4 Click **Go** to view the assessments and assign to your students.



Reports are simple to run and help you track student and class performance.

1 Click on **Reports**.

2 Select from four reports: Lesson Progress, Test Scores, Standards Mastery and Item Analysis.

Lesson Progress

Student Name	Assignments Completed	1/30/2009	1/25/2009	1/20/2009	1/13/2009	1/1/2009
Abath, Jackie	95%	Submitted	Submitted	Submitted	Complete	Complete
Adams, John	100%	Submitted	In Progress	Submitted	Complete	Complete
Allen, Justin	80%	Submitted	Submitted	Submitted	Complete	Complete
Bason, Sarah	75%	Submitted	Submitted	Submitted	Submitted	Submitted
Byrne, Jackson	50%	Submitted	In Progress	In Progress	Submitted	Not Started
Collins, James						
Colter, Bernie						

Classroom Test Reports

Student Name	Average % Student Scores	1/30/2009	1/25/2009	1/20/2009	1/13/2009	1/1/2009	12/5/2008
Abath, Jackie	70	-	-	60	-	78	72
Adams, John	-	-	-	-	-	-	-
Allen, Justin	72	-	-	72	-	-	-
Bason, Sarah	68	-	-	-	57	-	80
Byrne, Jackson	77	-	-	79	71	-	82
Collins, James	71	-	-	-	-	57	-
Colter, Bernie	71	-	-	-	-	-	-

Classroom Test Reports

Student Name	% Mastered	S1	S2	S3	S4	S5	S6
Abath, Jackie	80% (12/14)	●	-	-	●	-	●
Adams, John	80% (12/14)	●	-	-	●	-	●
Allen, Justin	57% (8/14)	●	-	-	●	-	●
Bason, Sarah	71% (10/14)	●	-	-	●	-	●
Byrne, Jackson	57% (8/14)	●	-	-	●	-	●
Collins, James	71% (10/14)	●	-	-	●	-	●

Item Analysis Report

Student Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
Abath, Jackie									D									C	
Adams, John		B						D										B	
Allen, Justin		C		B														C	
Bason, Sarah			C		B													D	
Byrne, Jackson									A			C						C	
Collins, James							A												
Colter, Bernie										A									
Forrester, Clint			A									B		A					
Student Totals	# incorrect >>	2	1	1	1	1	1	1	1	2	1	1	2	0	4	0	1	1	0
	# correct >>	6	7	7	7	7	7	7	7	6	7	7	6	8	4	8	7	7	8
	% correct >>	75	88	88	88	88	88	88	88	75	88	88	75	100	50	100	88	88	100

19. Classroom Management Resources ONLINE DIGITAL WALKTHROUGH

Quickly and easily manage your classes, view assignments, reports, notices and rosters from one location.

The screenshot displays the Pearson SuccessNet interface. The top navigation bar includes 'Home', 'Content', 'Planning', 'Classes', and 'Reports'. The 'Classes' tab is active, showing 'Manage Classes' and 'Build New Classes' options. A yellow circle with the number '1' highlights the 'My Classes and Groups' section. Below this, a table lists several classes with columns for 'Class/Group Name', 'Assignments', 'Reports', 'Notices', and 'Roster'. A 'Create a class/group' button is visible. A second yellow circle with the number '2' points to the 'Add a student' button in the 'Period 1 Class/Group Roster' section. This section includes a dropdown for '1 - Period 1', a checkbox for 'Include expired classes/groups', and buttons for 'Print parent letter', 'Remove students', 'Edit roster', 'Add a student', 'Select from school roster', and 'Upload my roster'. Below these buttons is a table with columns for 'Student Name', 'User Name', 'Grade', 'Student ID', and 'SuccessNet Language'.

Class/Group Name	Assignments	Reports	Notices	Roster
sample Mathematics I	view	view	view	view
MB-demo	view	view	view	view
Mathematics II	view	view	view	view
4 - Mathematics III	view	view	view	view
2 - Mathematics II	view	view	view	view
1 - Mathematics I	view	view	view	view

Student Name	User Name	Grade	Student ID	SuccessNet Language
one, student	studentone	09		English
three, student	studentthree	09		English
two, student	studenttwo	09		English

1 **Manage Classes** and create new classes within the Classes Tab.

2 **Add students** manually or **import class rosters**.

Try it for yourself!
Go to PearsonSuccessNet.com

Enter the User name and Password below.

User name: **INTHSMath**

Password: **pearsonCCSS1**

For more information, contact your Pearson Account Executive.

PearsonSchool.com
800-848-9500

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