Prentice Hall | Algebra 1 Geometry Algebra 2

Program Overview

Introduction

This guide provides an overview of a brand new high school math series: Prentice Hall Algebra 1, Geometry, and Algebra 2.

It explains the flexible custom solutions that enable teachers to deliver targeted instruction and demonstrates cool program features that increase student engagement. This guide also discusses how students build their conceptual understanding of mathematics and develop their problem-solving skills.

Flexible Custom Solutions

The Prentice Hall High School Math series offers flexible custom solutions that enable teachers to deliver targeted instruction with a blend of digital and print materials. Whatever the classroom situation, teachers find the solution they need. Consider the following situations:

- There is a solution to help teachers deliver instruction if they have a single computer in the classroom or if every student has his or her own laptop.
- There is a solution for teachers who use an interactive whiteboard.
- There is a solution for teachers who work with struggling learners and for those who teach advanced students.

Prentice Hall High School Math emphasizes mathematical reasoning and provides a wealth of print and online resources so teachers can easily adapt to the changing needs of their classrooms.

The Foundations Series

The Foundations Series is a parallel path that provides exactly the same curriculum in an accessible format. This solution fits low-level and inclusion classrooms. See The Foundations Series section in this guide for more details about this option.

Online Interactive Content

PowerAlgebra.com and PowerGeometry.com provide interactive lesson content for whole-class instruction. Teachers can enrich instruction with video that makes real-world connections and can model thinking and reasoning using interactive tools. Students can complete lessons independently using PowerAlgebra.com and PowerGeometry.com as stand-alone courses.

Engage Students

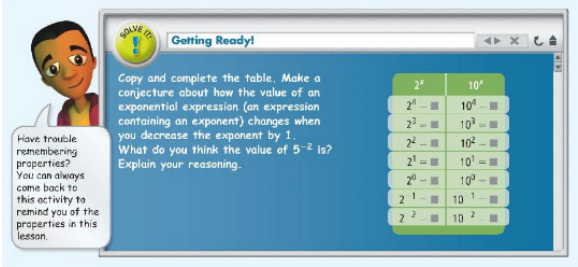
Prentice Hall High School Math includes a variety of program features that engage students and place math in a context of being relevant and meaningful to their lives.

My Math Videos

The digital curriculum included with PowerAlgebra.com and PowerGeometry.com speaks to 21st century learners. My Math Videos engage students in math concepts that are relevant to their lives. Also, the Pearson Video Challenge enables students to produce their own videos and submit them for sharing.

Solve It!

Solve Its! are real-world problems that help students tap into their prior knowledge and make connections to important concepts in the lesson.



Dynamic Activities

Dynamic Activities provide an interactive way for students to explore math concepts. Changing values in an equation or graph dynamically displays the effect on the outcome. This really helps students visualize the math.

MathXL® for School

MathXL® for School, an interactive tutorial, provides instruction and feedback for mid- and end-of-chapter practice.

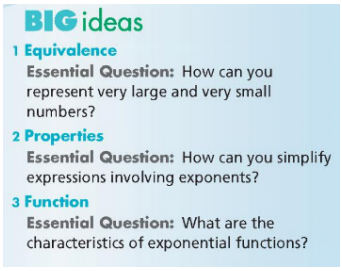
Conceptual Understanding

Students often think of math as a discrete set of rules and formulas, but teachers want students to be able to transfer and apply their knowledge to solve problems in unique, real-world situations. To do this, students need to conceptually understand mathematics.

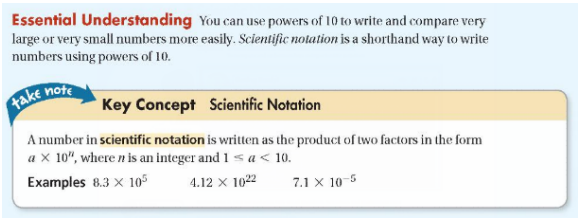
The Prentice Hall High School Math series helps students build their understanding of math by interweaving a strand of thinking and reasoning throughout each lesson, providing visual instruction, and connecting lesson concepts to the real world.

Understanding by Design

Understanding by Design, a framework codeveloped by consulting author Grant Wiggins, sets the foundation of conceptual understanding by introducing students to the Big Ideas covered in each chapter.

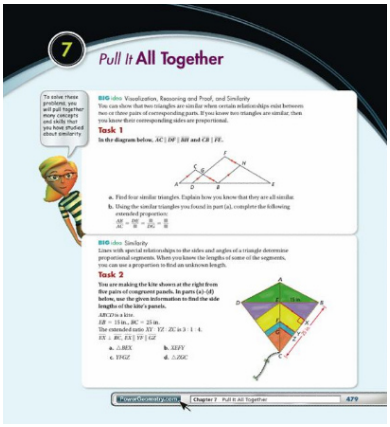


Students also explore corresponding Essential Understandings as they complete lessons. The Essential Understandings help students make connections around the Big Ideas.



Pull It All Together

Pull It All Together appears towards the end of each chapter. It summarizes the Big Ideas and answers the Essential Understandings. Students complete performance tasks to demonstrate their understanding of concepts and relationships.



Visual Instruction

Visual instruction also helps students deepen their mathematical understanding. Color coding explicitly communicates information to help students analyze complex problems. Talking charts and graphs clarify important information. Students also have access to a visual glossary of key vocabulary terms in their student edition and online.

Solve It!

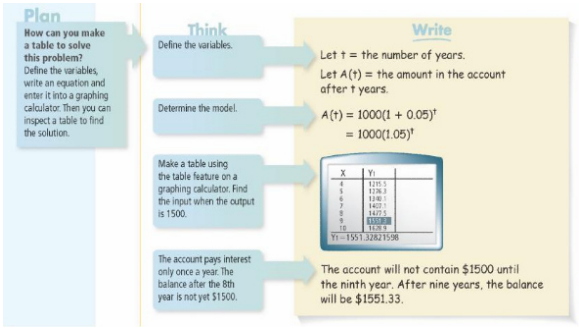
The Solve It! activities at the beginning of each lesson use engaging visuals and real-world examples. Students tap into their prior knowledge to solve the problem and apply their thinking and reasoning skills. Students connect what they know to important concepts in the lesson.

Problem Solving

Lessons provide problem-solving strategies and modeled thinking and reasoning to foster students' mathematical reasoning.

Modeled Thinking and Reasoning

The Plan–Think callouts model how effective problem solvers work out their solutions.

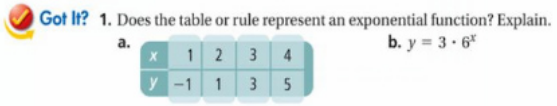


Another modeled thinking strategy is Know–Need–Plan.

The online problems provide step-by-step instruction with guided support from an avatar, which enables students to progress at their own pace.

Got It?

The Got It? provides a check for understanding so teachers can make instructional decisions during the lesson.


Got It? 1. Does the table or rule represent an exponential function? Explain.

a.

x	1	2	3	4
y	−1	1	3	5

b. $y = 3 \cdot 6^x$

Differentiated Instruction

This Prentice Hall High School Math series simplifies the difficult task of personalizing instruction to help teachers meet the needs of all students in their classrooms.

Student Companion

The Student Companion worktext provides additional lesson support. This worktext includes vocabulary support and practice as well as step-by-step support for the Got It? problems.

Leveled Resources

There are a variety of leveled resources for instruction and remediation in the All-in-One Teaching Resources. On the Lesson Resources pages of the Teacher's Edition, notice the personalized prescriptions based on the Lesson Quiz results. This enables teachers to make data-driven instructional decisions about review assignments.

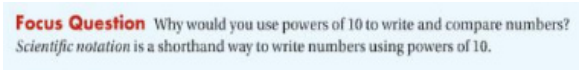
Success Tracker

PowerAlgebra.com and PowerGeometry.com include Success Tracker, which is an online assessment tool. Success Tracker instantly analyzes student performance and assigns appropriate remediation. Teachers can also track class and student performance through a variety of robust reports that display lesson progress as well as mastery of skills based on assessment results.

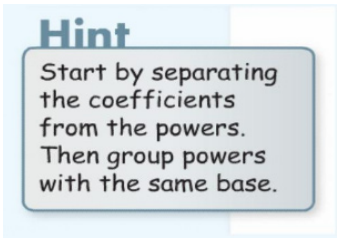
The Foundations Series

The Foundations Series provides the same comprehensive curriculum in an accessible format for struggling learners. Some of the lessons and chapters are shorter in the Foundations Series to make the content manageable for struggling learners. This also allows for more frequent assessment.

The Essential Understandings appear as Focus Questions that provide explicit answers.


Focus Question Why would you use powers of 10 to write and compare numbers?
Scientific notation is a shorthand way to write numbers using powers of 10.

Hint boxes assist students who might get stuck so they can start solving the problem.



Example problems provide the thinking on the left to model reasoning while the math is displayed on the right. The first practice problem includes guided practice and the solution.

Classroom Management

Prentice Hall High School Math includes resources that simplify classroom management tasks.

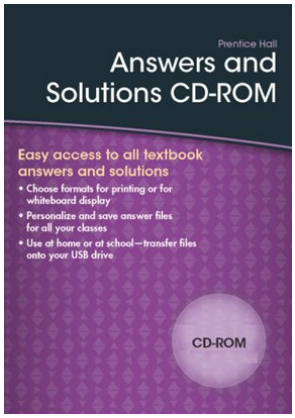
Online Lesson Planner

There is a convenient lesson planner on PowerAlgebra.com and PowerGeometry.com that saves teachers time.

Lesson resources are conveniently available in print, on DVD, and online.

Answers and Solutions CD-ROM

The Answers and Solutions CD-ROM saves teachers significant time. This CD-ROM not only provides the answers to all lesson problems but also provides the stepped out solutions.



Review

This overview guide discussed Prentice Hall Algebra 1, Geometry, and Algebra 2. It examined several custom solutions and the program features that increase student engagement. The guide discussed how the program helps students build conceptual understanding of mathematics and develop problem-solving skills. Finally, it looked at differentiated instruction, the Foundations Series, and classroom management. With the Prentice Hall High School Math series, teachers will find a perfect solution that fits their classrooms and the needs of their students.

For more information, just watch the other Prentice Hall High School Math series tutorials on this Web site.