

**GLENCOE
MATHEMATICS**

Ohio Guide to Daily Intervention



For use with
Glencoe Algebra 1
Glencoe Algebra 2

**Mc
Graw
Hill** **Glencoe**

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*Glencoe Algebra 1 and Algebra 2
Ohio Guide to Daily Intervention*

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Contents

Teacher’s Guide to Using the Ohio Guide to Daily Intervention	iv
Daily Intervention in the Student Editions	1
Daily Intervention in the Teacher Wraparound Editions	2
Daily Intervention in the Teacher Classroom Resources	3
Daily Intervention on the Internet	4
Daily Intervention with Other Resources	5
Student Remediation Plan	6
Ohio Academic Content Standards, Grade 9 Indicators, Correlated to <i>Glencoe Algebra 1</i>	8
Ohio Academic Content Standards, Grade 10 Indicators, Correlated to <i>Glencoe Algebra 1</i> and <i>Glencoe Geometry</i>	11
Correlation of <i>Glencoe Algebra 1</i> Ohio Daily Intervention Resources	14
Ohio Academic Content Standards, Grade 11 Indicators, Correlated to <i>Glencoe Algebra 2</i>	28
Correlation of <i>Glencoe Algebra 2</i> Ohio Daily Intervention Resources	31

Teacher's Guide to Using the Illinois Guide to Daily Intervention

Today it is vital that students understand the mathematics that they are learning. Using computers on the job, making good consumer choices, evaluating information, and other life skills depend upon good mathematics skills. Since no two students are exactly the same, in every classroom there will be students of various abilities and skill levels. This booklet focuses on ways that teachers can intervene to assist the struggling student to improve his or her performance. Helping all students succeed in mathematics and develop their mathematical reasoning skills is an ambitious and worthwhile goal.

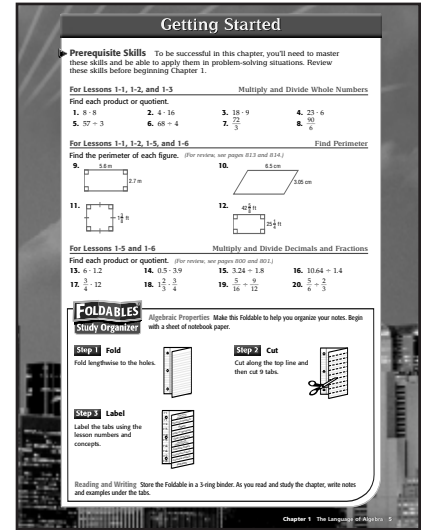
In order to ensure students' success, teachers can follow a three-step process of daily intervention.

- 1. Assessment of individual student needs** Teachers need to evaluate the needs of students in order to meet those needs.
- 2. Ongoing evaluation of student progress** Monitoring students' progress and understanding on a daily basis allows a teacher to head off trouble.
- 3. Monitoring instructional activities to strengthen students' weaknesses** Providing opportunities for students to immediately address any weaknesses ensures students' continued success.

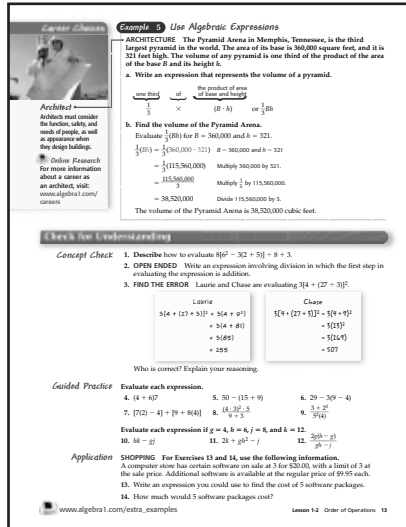
The *Glencoe Algebra* program includes tools for daily intervention in the Student Edition, the Teacher Wraparound Edition, the Teacher Classroom Resources, the Internet, and other products. Using these tools can help you help your students realize mathematical success. The following pages detail each resource available and the correlation shows how they are used in each lesson of *Glencoe Algebra 1* and *Glencoe Algebra 2*.

Daily Intervention in the Student Editions

- In the Getting Started section at the beginning of each chapter in the Student Edition, the **Prerequisite Skills** check students' preparedness for the chapter. You can check prior knowledge by reviewing prerequisite topics and explaining how these prerequisite topics are related to the current concept.
- Additional practice of **Prerequisite Skills** is provided at the end of each lesson with page references to help students review the concepts. These exercises review concepts and skills that will be applied in the next lesson. The Prerequisite Skills section in the Student Handbook in the back of the Student Edition provides explanation and practice of skills that are needed for success in algebra.



Algebra 1 Student Edition, p. 5

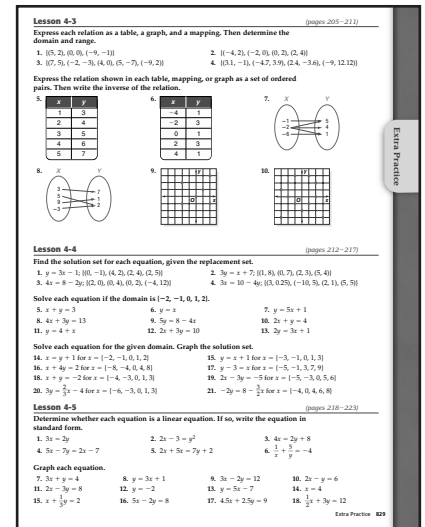


Algebra 1 Student Edition, p. 13

- You can use the **Check for Understanding** exercises in class to ensure that all students understand the concepts.
- **Concept Check** Students communicate their understanding of the concepts just taught by defining, describing, and explaining mathematical concepts.
- **Guided Practice** These exercises present a representative sample of the exercises in the Practice and Apply section. A key is provided in the Teacher Wraparound Edition that correlates the exercises to the corresponding examples. **Find the Error** exercises help students identify and address common errors before they occur.
- **Application** Students have the opportunity to solve a real-world or mathematical connection problem as a check for understanding.

In the back of the Student Editions,

- **Extra Practice** provides additional, immediate practice with the skills and concepts from each lesson.
- **Mixed Problem Solving** includes numerous verbal problems for students to reinforce their problem-solving skills.
- **Preparing for Standardized Tests** reviews various strategies for resolving questions like those that appear on the OGT.



Algebra 1 Student Edition, p. 829

Daily Intervention in the Teacher Wraparound Editions

• Every Ohio Academic Content Standard is correlated to lessons in *Glencoe Algebra 1* and *Glencoe Algebra 2* Student Editions.

• **Daily Intervention** features provide suggestions for addressing various learning styles and helping students who are having difficulty.

• The **Differentiated Instruction** suggestions are keyed to eight commonly accepted learning styles.

• **Unlocking Misconceptions** suggestions help you analyze where students make common errors so you can point these trouble spots out to them.

2 Teach
INCLUDES EXAMPLE
 Find each quotient.
 $a. 40 \div (-5) = -8$
 $b. \frac{100}{-2} = -50$
 $c. \frac{-12}{3} = -4$
Simplify. $\frac{20}{-2} \div \frac{3}{-1} = -10 \div -3 = \frac{10}{3}$

DIVIDE RATIONAL NUMBERS
INCLUDES EXAMPLE
 Find each quotient.
 $a. -112.23 \div 8.7 = -12.9$
 $b. \frac{-2}{3} \div \frac{4}{5} = \frac{-2}{3} \cdot \frac{5}{4} = \frac{-10}{12} = \frac{-5}{6}$

2. Teach
INCLUDES EXAMPLE
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5 Practice/Apply
Study Notebook
 Near students:
 • record the rules for dividing integers.
 • compare.
 • include any other models that they used to help in mastering the skills in this lesson.

DAILY INTERVENTION
Differentiated Instruction
Visual
 Use index cards to make each component of a division expression an equation. Have students model the division and then rearrange the cards to make a multiplication sentence, verifying the result.

Algebra 1 Teacher Wraparound Edition, p. 85

Assess
Open-Ended Assessment
 Modeling Use making tape to create a number line on the floor in front of the classroom. Write each of numbers on the board and have students stand on the line to "graph" the points. Also write absolute value statements on the board and have students step the "distance" equivalent to the absolute value on the number line.

Getting Ready for Lesson 2-4
PRE-REQUISITE SKILL Students will learn about adding and subtracting rational numbers in Lesson 2-2. They will apply the rules of adding and subtracting integers to computations with fractions. Use Exercises 20-27 to determine your students' familiarity with the addition and subtraction of fractions.

Answers
 20. $\frac{1}{2} + \frac{1}{3} = \frac{3}{6} + \frac{2}{6} = \frac{5}{6}$
 21. $\frac{2}{3} - \frac{1}{4} = \frac{8}{12} - \frac{3}{12} = \frac{5}{12}$
 22. $\frac{3}{4} + \frac{1}{2} = \frac{3}{4} + \frac{2}{4} = \frac{5}{4} = 1\frac{1}{4}$
 23. $\frac{1}{2} - \frac{1}{3} = \frac{3}{6} - \frac{2}{6} = \frac{1}{6}$
 24. $\frac{2}{3} + \frac{1}{4} = \frac{8}{12} + \frac{3}{12} = \frac{11}{12}$
 25. $\frac{1}{2} - \frac{1}{4} = \frac{2}{4} - \frac{1}{4} = \frac{1}{4}$
 26. $\frac{3}{4} - \frac{1}{2} = \frac{3}{4} - \frac{2}{4} = \frac{1}{4}$
 27. $\frac{1}{2} + \frac{1}{3} = \frac{3}{6} + \frac{2}{6} = \frac{5}{6}$

DAILY INTERVENTION
Differentiated Instruction
ELL
Verbal/Linguistic Have students look up the word absolute in a dictionary and find meanings that relate to mathematical meaning. Also have them read the definitions of terms beginning with absolute, such as absolute value, absolute humidity, or absolute pitch. Have students read about the definition they found and make students to define in their own words the mathematical meaning of absolute value based on any insight they have gained from the dictionary definition.

Algebra 1 Teacher Wraparound Edition, p. 72

• Each lesson ends with **Open-Ended Assessment** strategies for closing the lesson and ensuring that students understand and can apply the concepts. These strategies for bringing closure to the lesson are addressed through writing, modeling, and speaking.

Practice and Apply
 One coin is randomly selected from a jar containing 70 nickels, 50 dimes, 40 quarters, and 30 halter coins. Find each probability.
 1a. P(quarter) = $\frac{40}{190} = \frac{4}{19}$
 1b. P(not a dime) = $\frac{140}{190} = \frac{14}{19}$
 1c. P(not a dime or a quarter) = $\frac{150}{190} = \frac{15}{19}$
 1d. P(not a dime and not a quarter) = $\frac{100}{190} = \frac{10}{19}$
 1e. P(not a dime or a quarter or a halter coin) = $\frac{190}{190} = 1$
 1f. P(not a dime or a quarter or a halter coin or a nickel) = $\frac{190}{190} = 1$

2. Practice/Apply
Study Notebook
 Near students:
 • add the absolute lengths of the auxiliary lines to four probability tables written for Chapter 2.
 • add a descriptive comparing and contrasting probability and odds.
 • include any other models that they did help in mastering the skills in this lesson.

DAILY INTERVENTION
Find the Error
 To solve this problem, students must be able to differentiate between probability and odds. Remind students that for probability to equal 1, or 100%, the event must always occur. Are all the cards in a standard deck of cards odd?

About the Exercises...
Organization by Objective
 • Probability: 14-25, 51, 54, 57
 • Odds: 36-50, 52, 53, 55, 56, 59

Assignment Guide
 Basic: 15-49 odd, 51-53, 59-62
 Average: 15-49 odd, 51, 54, 59-62
 Advanced: 15-49 even, 54-74 (optional 75-82)
 All Practice Quiz 2 (1-10)

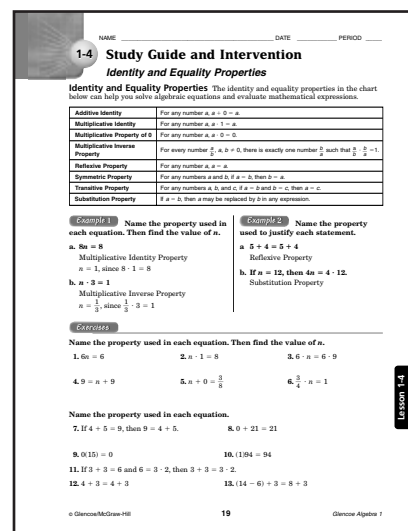
Teacher to Teacher
Shawntay Moore **Jupiter Community HS, Jupiter, FL**
 "I have my students count the number of light bulbs in a package or cup and then find the probability and odds of choosing a specific color. I also have students collect the data and represent their findings through charts and graphs."

Algebra 1 Teacher Wraparound Edition, p. 99

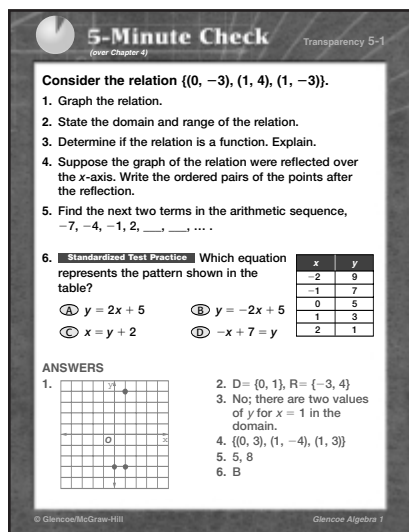
• **Teacher to Teacher** features contain teaching suggestions from teachers who are successfully teaching Algebra I or Algebra II in their classrooms. Suggestions include content tips, techniques, and activities that can be used in intervention.

Daily Intervention in the Teacher Classroom Resources

- The **Study Guide and Intervention** masters found in the Chapter Resource Masters summarize key concepts for each objective and provide practice exercises. These masters are also available as a consumable **Study Guide and Intervention Workbook** in English and Spanish. You may wish to use these masters for additional instruction and practice with individual students, in cooperative groups, or in peer tutoring situations.



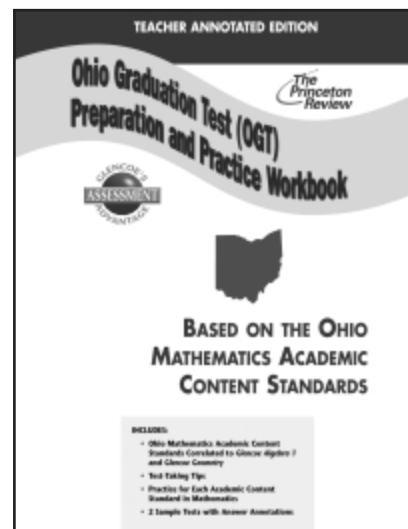
Algebra 1 Chapter 1 Resource Masters, p. 19



- 5-Minute Check Transparencies with Standardized Test Practice** For each lesson, there is a full-size transparency with questions covering the previous lesson or chapter. Also included on each transparency is a Standardized Test Practice question. These provide an excellent ongoing opportunity for checking students' understanding of the mathematics they are learning.

Algebra 1 5-Minute Check Transparency 5-1

- The **Ohio Graduation Test (OGT) Preparation and Practice Workbook** contains practice for each of the Ohio Mathematics Academic Content Standards and two Sample Tests. Lessons include test-taking tips, examples, and practice questions. In the Teacher Annotated Edition, answers are printed full-size in place on the student pages. Practice questions and Test questions are referenced by standard. A correlation between Ohio Mathematics Academic Standards and *Glencoe Algebra 1* and *Glencoe Geometry* is also included.



Ohio Graduation Test (OGT) Preparation and Practice Workbook, Teacher Annotated Edition

Daily Intervention on the Internet

- **Online Study Tools** These comprehensive review and intervention tools are available anytime, anywhere, simply by logging on to:

oh.algebra1.com or oh.algebra2.com

- The **Parent and Student Study Guide** contains a one-page worksheet for each lesson in the *Glencoe Algebra 1* Student Edition and a one-page review for each chapter. This online workbook offers an excellent opportunity for students and parents to work together to strengthen weaknesses and develop mathematical understanding.

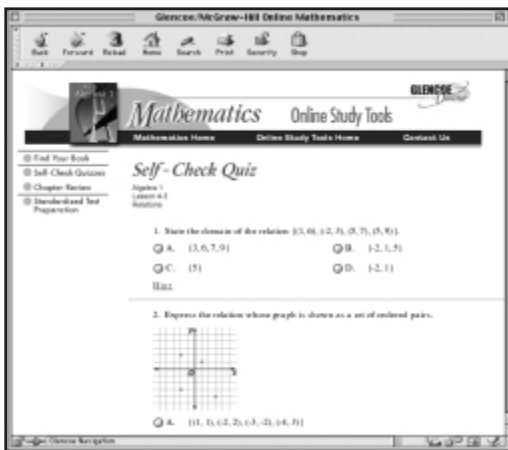
oh.algebra1.com/parent_student

- **Self-Check Quizzes** are available for every lesson. Immediate feedback lets the student know whether the answers are correct and references specific pages and examples in the Student Edition for review. Access the Self-Check Quizzes directly at:

oh.algebra1.com/self_check_quiz

OR

oh.algebra2.com/self_check_quiz



- **Extra Examples** that mimic the ones in the Student Edition are completely worked out and available for students to review at:

oh.algebra1.com/extra_examples

OR

oh.algebra2.com/extra_examples

You may wish to use these examples in reteaching or to have students review areas of weakness.

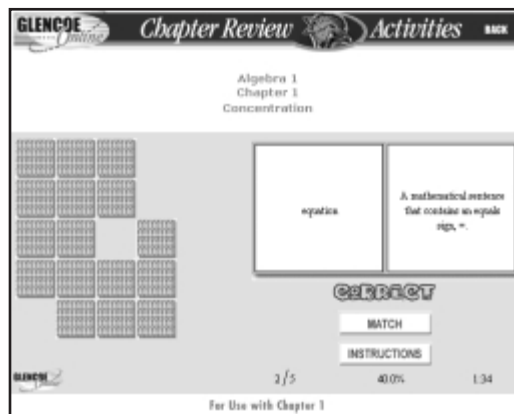


- **Vocabulary Review** lets you and your students check their understanding of the terms and definitions used in each chapter. Access this game-style review at:

oh.algebra1.com/vocabulary_review

OR

oh.algebra2.com/vocabulary_review



Daily Intervention with Other Resources

SKILL 38 Name _____ Date _____ Period _____

Comparing and Ordering Rational Numbers

To compare fractions, write each fraction as a decimal. Then compare the decimals.

Example 1 Compare $\frac{2}{3}$ and $\frac{1}{2}$.

$$\frac{2}{3} = 0.666666667$$

$$\frac{1}{2} = 0.5$$

Since $0.666666667 > 0.5$, $\frac{2}{3} > \frac{1}{2}$.

To compare percents, compare the numbers without the percent sign.

Example 2 Compare 15% and 17.5%.

Since $15 < 17.5$, $15\% < 17.5\%$.

Fill in each \bigcirc with $<$, $>$, or $=$ to make a true sentence.

- $\frac{1}{2} \bigcirc \frac{2}{3}$
- $\frac{1}{3} \bigcirc \frac{1}{2}$
- $\frac{11}{10} \bigcirc \frac{11}{10}$
- $\frac{11}{10} \bigcirc \frac{11}{10}$
- $\frac{11}{10} \bigcirc \frac{11}{10}$
- $\frac{11}{10} \bigcirc \frac{11}{10}$
- $1\frac{1}{4} \bigcirc 2\frac{1}{2}$
- $3\frac{1}{2} \bigcirc 3\frac{1}{2}$
- $5\frac{10}{10} \bigcirc 5\frac{10}{10}$
- 14% \bigcirc 12.5%
- 9% \bigcirc 8%
- 0.04% \bigcirc 0.25%
- 250% \bigcirc 120%
- 16.6% \bigcirc 10%
- 75.8% \bigcirc 75.9%

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Prerequisite Skills Workbook, p. 75

- The **Prerequisite Skills Workbook** provides extra practice on basic skills that are needed for success in Algebra I. You may use these pages to give students an opportunity to review and refresh their skills. Topics addressed include:

- Operations with Whole Numbers
- Operations with Decimals
- Operations with Fractions
- Measures in the Metric and Customary Systems
- Line Graphs
- Histograms
- Probability

- The **AlgePASS: Tutorial Plus** and **Alge2PASS: Tutorial Plus** CD-ROMs provide an interactive, self-paced tutorial for an Algebra I or Algebra II curriculum. The lessons are correlated directly to *Glencoe Algebra 1* and *Glencoe Algebra 2*. Each lesson, or concept, includes a pretest, tutorial, guided practice, and posttest. Students' answers to the pretests automatically determine whether the tutorial is needed for that concept—without taking teacher time to grade it. This software is designed to identify and address student weaknesses.

Solving Linear Equations in Two Variables Tutorial 5

AlgePASS™

Isolate the variable! Use addition and subtraction, and balance.
Solve for x :

$$x - 3y = 24$$

$$x + 3y - 3y = 24 + 3y$$

The first step in solving this equation is to isolate the appropriate variable.
How can you isolate x on one side of the equal sign?

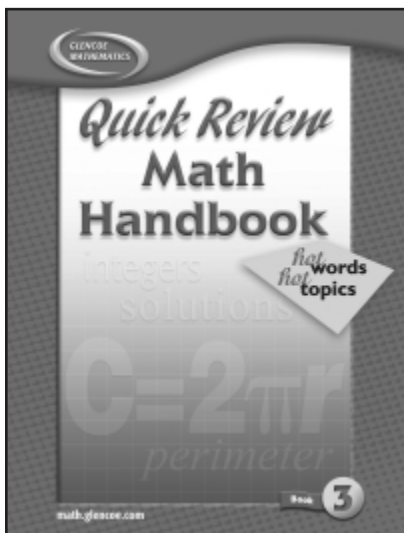
Add y to both sides of the equation

Divide both sides of the equation by y

Add $3y$ to both sides of the equation

Right! To undo the subtraction $(-3y)$, we add $3y$ to both sides of the equation.

Stop Exit Calculator Back Next



- **Quick Review Math Handbook: Hot Words, Hot Topics**, is Glencoe's mathematical handbook for students. The Hot Words section includes a glossary of terms while the Hot Topics section consists of explanations of key mathematical concepts. An exercise set is included to check students' understanding of the concepts. This valuable resource can be used as a reference in the classroom or for home study.

Student Remediation Plan

Teacher Instructions

You can use the Student Remediation Plan template that follows to plan for students who are in need of intervention/remediation. It can be used for high stakes tests, if there is no formal remediation plan required by your school or district. It can also be used for mid-semester reviews or project-based work.

Purpose

- To identify students' specific problem areas and link them to steps that can produce attainable results.
- To provide a template to easily record remediation plans and use them to communicate with students and/or parents.

Suggested Uses

- *Involve students in their Remediation Plans.*

Hold a teacher-student conference to go over the details of the remediation plan.

Make certain they understand what they are to do, and have them sign a copy of their plan as a sign of good faith.

- *Involve parents as much as possible.*

You may also wish to involve parents in the remediation plan, if the situation is appropriate. Like your students, make sure the parents understand the steps their child should take to improve his or her performance in your class.

- *Identify common steps and resources that can be used for different levels of remedial study.*

Try to identify several sets of steps and resources for at least two different levels of student need. For example, you might identify a course of action for students who need a small amount of extra work, and one for those that need a great deal of extra study in the identified academic area.

Then, as you identify students in need of intervention, you can choose their level and the appropriate remediation plan. While you will probably want to customize the plan per student, you will at least have a defined set of steps with which to begin. After the semester ends, you can then evaluate each plan's success rate and determine what can be revised to improve each set of actions or resources.

Student Remediation Plan

Student _____ Teacher _____

Course _____ Date _____

Topic/Project/Exam _____

Problem Area	Solution Steps to Be Taken	Resources Needed