Harness the Power of Personalized Learning
Teach Math the Way Students Learn

ALEKS is an online math solution for grades 3–12 that uses artificial intelligence to identify and provide instruction on the topics each student is most ready to learn next. It’s an approach proven to create math confidence and measurable success.
Flexibility and engagement

ALEKS creates a dynamic learning pathway for every student that leads to the topics he or she is most ready to learn next. Students are challenged, never frustrated or bored.

Robust data, when and how you need it

ALEKS empowers educators with rich real-time data through customizable reports that show student progress, mastery, and time on task.

Personalized instruction

Powered by artificial intelligence, ALEKS® provides periodic assessments to pinpoint knowledge gaps. ALEKS uses the results to create personalized learning pathways that lead every student to mastery.
The Power of Research-Based Learning

Cutting-edge cognitive research has changed what we know about learning and inspired the creation of technology-based tools to make learning more effective.

Developed by cognitive scientists

ALEKS® is the product of decades of research conducted at top universities with support from the National Science Foundation. Its unique approach to math instruction is based on a concept called Knowledge Space Theory, which holds that:

- Knowledge is not linear; it’s a complex web of interrelated topics.
- A student may take any one of trillions of pathways through the web to master a particular concept.

"With ALEKS, students achieve mastery more than 90% of the time."

Designed to ensure mastery

ALEKS maps each student’s evolving knowledge state and continuously refines the way topics are connected to each other. By presenting the topics a student is most ready to learn next, ALEKS ensures a mastery rate of more than 90 percent.

LEARN MORE

To read ALEKS success stories, go to “Real-World Results with ALEKS.”
Meet State and Common Core Standards

Dynamic instruction, differentiation, and flexible reporting options keep students and educators on track.

**Focused, differentiated instruction**

- **Regular Knowledge Checks** provide the robust data essential for focused instruction.
- **An open-response environment** gives educators a clear picture of student understanding.
- **Artificial intelligence** uses Knowledge Check results to pinpoint the unlearned concepts most crucial for students to know.
- **Personalized learning**, including fully bilingual English/Spanish instruction, ensures that all students master these concepts.

**Detailed data**

Real-time reporting allows educators to:

- Measure progress at the student, class, school, and district levels.
- View progress and ready-to-learn topics related to a specific math standard.

**SUCCESS STORY**

“I have found that mastery in ALEKS® correlates well with state test scores and other progress assessments. I have seen students increase their achievement by up to 20 points.”

– Geoff Barrett, Teacher, West Lane Technical Learning Center, OR
ALEKS® delivers a powerful three-phase cycle of learning and assessment that targets the unique needs of every student.

**Assessment**

Students begin with an Initial Knowledge Check to accurately measure what they know, don’t know, and are most ready to learn next. The results are summarized in the ALEKS Pie, a tool that guides student instruction.

Within each pie slice (topic area), the color part shows what a student knows. The gray area shows what the student has left to learn. For more information on ALEKS Pie Reports, turn to “Real-Time Reporting Options.”

<table>
<thead>
<tr>
<th>Functions and Lines</th>
<th>46 of 83 Topics</th>
<th>55%</th>
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<tbody>
<tr>
<td>ALEKS Pie Mastery: 399.4 of 505 Topics</td>
<td>58%</td>
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<td>Current Objective: Chapter 5 (02/20/2015)</td>
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**Top Ready to Learn Topics**

- Finding a specified term of an arithmetic sequence given the common difference and first term: 31%
- Writing an explicit rule for an arithmetic sequence: 28%
- Identifying direct variation from ordered pairs and writing equations: 28%
- Graphing a parabola of the form y = ax²: 24%
Personalized learning

As students work through their Ready to Learn Topics, ALEKS® provides immediate feedback, detailed explanations, definitions, and other tools for building mastery.

**ALEKS offers:**

- A unique problem algorithm that generates a different leveled problem set for every student, every time
- Full explanations for the answers to every problem
- Open-response questions that ensure a correct answer signals student learning
- Content aligned to the Common Core and the learning standards of all 50 states

Students in Learning Mode use intuitive answer-input tools to solve free-response problems.

Continuous reinforcement

As students master topic after topic, ALEKS periodically rechecks their knowledge to ensure retention. The system provides remediation for topics students have not successfully remembered.

The power of ALEKS, in Spanish

Located at the top of every page, the English-Spanish Toggle lets students click to switch back and forth from English to Spanish instruction. The translation includes the entire program interface as well as all of its contents.
The ALEKS Pie Report provides two levels of detail about student or class progress:

1. An at-a-glance overview organized by topic area
2. A topic-by-topic breakdown showing exactly what students know, don’t know, and are most ready to learn next

Students select a slice in the ALEKS Pie to view their progress. The name of that pie slice and the progress students have made in each category appear to the right of the ALEKS Pie.

ALEKS uses artificial intelligence to predict which new topics a student is ready to learn and which of those topics will be easiest for that student to master. Recommended topics are listed in a sequence based on each student’s knowledge. While in Learning Mode, the student can choose new topics either from the list or from the ALEKS Pie.
Progress Report
The Progress Report makes it easy for educators to:

- Visualize each student’s progress through a course, from Initial Knowledge Check to his/her current knowledge state.
- Monitor each student’s retention of topics mastered between Knowledge Checks.

Individual Student
Select a student name to view progress history at the time of each Knowledge Check and topics learned between Knowledge Checks.

Class View
View learning progress over a period of time — or just since the latest Knowledge Check.
Time & Topic Report

The Time & Topic Report gives educators access to detailed data on the time each student spends in ALEKS®. This report:

- Shows all the topics explored in Learning Mode: those the student has learned successfully as well as those the student has tried but failed to learn.
- Offers support on topics with which students are struggling.

Individual Student

Select an individual student to view the topics he or she has worked on, diagnose areas of weakness, and provide instructional support as needed.
Standards Report

The Standards Report delivers a precise breakdown of student performance measured against the Common Core State Standards or any of the 50 states’ standards. This enables educators to be sure each student is prepared for standardized testing.

Student Standards Progress

Provide targeted instruction and test preparation for each student by viewing the exact standards that the student has learned, has mastered, is ready to learn, and has left to learn.

Class Standards Progress

Monitor average class progress by strand or view a breakdown of class progress by standard.
Two Ways to Enhance Instruction with ALEKS

1

Adding ALEKS® to a wide range of programs

ALEKS works in tandem with many core math programs to create powerful personalized learning experiences. By adding it to an existing program, educators can use it while:

- Transitioning students to the next level in a series
- Implementing a district or state adoption
- Addressing the needs of diverse groups of learners
- Preparing students for assessments

ALEKS courses through ALEKS.com:

Elementary School
QuickTables
Mathematics – Grade 3
Mathematics – Grade 4
Mathematics – Grade 5
Mathematics – Grade 6

Middle School
Middle School Math Course 1
Middle School Math Course 2
Middle School Math Course 3
Algebra Readiness
Pre-Algebra
Algebra 1

High School
Algebra Readiness
Algebra 1
Algebra 2
Algebra 2 with Trigonometry
PreCalculus

Quick Tables
A math fact mastery program for addition, subtraction, multiplication, and division.

LEARN MORE
View all ALEKS courses at:
aleks.com/k12/course_products
Choosing a program with ALEKS® built in

Educators can also use ALEKS as a seamlessly integrated part of a core mathematics program. We offer this option with two of our effective math solutions:

**Glencoe Math ©2015**
for grades 6–8

**Gencoe High School Math Series ©2014**
for grades 9–12

ALEKS-embedded programs enable educators to:

- Use ALEKS instantly, with no teacher set-up
- Access ALEKS through ConnectED with just one login and URL.
- Streamline the learning process — ALEKS content mirrors the content of their course.

With ALEKS-embedded programs, students can:

- Access ALEKS from any page of their program interface with a single click.
- Use program resources to enhance their learning in ALEKS.
- Enjoy ALEKS-empowered learning that mirrors the contents of their course.
Utah pilot creates proven statewide success

In the 2013–2014 school year, the state of Utah launched the STEM Action Center Technology Pilot. Its goal: to implement 11 “best-in-class” technologies across the state and measure their effectiveness. More than 70 schools and 185 teachers participated.

The initial phase of the pilot involved more than 31,500 students in grades 7, 8, and 10. This represented more than 25 percent of the state’s total targeted student population.

As shown in Chart 1, ALEKS® users in grades 7 and 8 performed well above expectations for the fall semester as well as for the school year as a whole.

When the Utah pilot asked for teacher feedback, a high percentage of respondents were teachers who had used ALEKS. One hundred percent of those teachers expressed satisfaction with the program.

SUCCESS STORY

“Before we used ALEKS, some of our students scored toward the bottom on the math portion of the state assessment in our district. After we implemented ALEKS, the same students had the top scores in the entire district.”

– James Zwerican, Math Dept. Chair, Haas Elementary School, Michigan
California implementation boosts a middle school’s test scores

Big Bear Middle School in Big Bear, California, implemented ALEKS® to help students who were struggling to pass the California Standards Test (CST) and progress to Algebra 1.

![Average Point Gain When Retaking the California State Standards Test (CST)](chart)

▲ Students who used ALEKS for remediation for just one year increased their test scores by an average of 30 points.

**SUCCESS STORY**

“After using ALEKS for a year, our Algebra Readiness 8th graders more than doubled the increase in CST score that’s typically seen at our school. Moreover, 56 percent of these students scored at least Proficient, compared to the usual 40 percent.”

– Debi Burton, Teacher, Big Bear Middle School, CA

Read more success stories: aleks.com/k12/success_stories
ALEKS creates dramatic learning outcomes for a variety of implementation models:

Core Curriculum
Provides a complete standards-based curriculum with formative and summative assessments and direct instruction.

Supplemental
Enhances classroom learning with additional practice or homework.

Remediation
Fills knowledge gaps with targeted coverage of prerequisite skills.

Response to Intervention (RtI)
Personalizes instruction within the appropriate RtI tier and framework.

Special Education
Supports IEPs with truly personalized learning and a dedicated IEP Report.

Gifted
Challenges students with a self-paced progression into higher-level content.

To learn more, visit aleks.com