

# Math Reference Guide

## What is SuccessMaker?

SuccessMaker is an award-winning educational software program that delivers instruction in English/language arts and mathematics for learners in grades K-8 to supplement classroom instruction. The SuccessMaker program:

- Provides Adaptive Motion in every course that differentiates and personalizes instruction as a personal tutor would for students functioning in grade levels K-8 and enrolled in grades K-12.
- Correlates to state and Common Core State Standards for both mathematics and language arts in grades K-8.
- Offers strategic course selection that allows teachers to customize courses by skills or standards, based on their instructional strategy to:
  - Personalize targeted intervention with courses that let students' needs and abilities be the main driver of instruction to fill gaps and bring them up to grade level with Foundations (default) courses. As students move through the Foundations (default) courses, they can work below, on, or above grade level based on their unique needs. When they struggle, the program automatically launches scaffolding strategies that may call up prerequisite instruction for critical concepts from earlier grade levels as needed.
  - Focus on exposure to and practice with on-grade-level content using College and Career Readiness courses that only present instruction aligned to a grade level and move students ahead for building on-grade-level proficiency. Teachers can easily create a College and Career Readiness on-grade-level course by selecting a desired grade level from the content standards to provide students with the right

types of support they need.

- Achieve students' goals by using both courseware strategies with the same students.
- Individualize a student's instructional level with Northwest Evaluation Association™ (NWEA™) Measures for Academic Progress® (MAP®) Growth™ content.
- Provides the student with 15-20 minutes focused on each subject, two to three times a week, working independently outside of core classroom instruction.
- Accommodates a full array of different learning styles, including those served by special education, gifted, and at-risk students, and English language learners.
- Is based on research that includes extensive analysis of state standards by leading researchers and teams of experts.
- Provides detailed reports that promote data-driven instruction and at-a-glance progress monitoring.
- Generates forecasting data that assists with scheduling students for optimum performance on high-stakes tests.

## College and Career Readiness Instructional Strategy

SuccessMaker provides College and Career Readiness content emphasizing strong coverage of on-grade-level academic content and special features designed to help learners transition their habits, practices and ways of thinking:

- Learning objects and instructional items to address standards essential for the development of major cluster standards in math.
- More rigorous questions and instructional feedback in the Math course to better address the demands for increased levels of complexity in questions and interactions with text.
- Alignment of course content to ensure that students encounter instruction at the right grade level.
- In Math, the content is cohesive and coherent, carefully connecting learning within and across grades so that students can build new understanding onto foundations built in previous years. A balance of conceptual understanding, procedural skill, and fluency and application of skills in problem solving situations is required.

## SuccessMaker Math Overview

SuccessMaker Math is a highly-visual, engaging, and interactive standards-based course designed to develop and maintain fundamental concepts taught in K-8 mathematics. SuccessMaker uses diagnostic sessions called Initial Placement (IP) to determine the student's starting level. Students' progress through the content via the following types of presentation:

- Mixed Presentation - SuccessMaker accomplishes individualized instruction by the random selection of content strands within a specific level. Learning objects have carefully defined parameters that randomly generate numbers and graphics. The resulting

collection of content provides enough variety during a session that students rarely see the same combinations of strands, numbers, and graphics repeated.

- Interaction - SuccessMaker Math uses a variety of interaction types including drag and drop, drop down, drawing, number entry, and multiple choice (single and multiple select).
- Feedback - Students receive feedback that changes depending on whether their answers are correct or incorrect. They also receive rewards as they advance through the course.
- Animation - Nine animated themes that include introductory animations and animated characters guide students through the course.
- Tutorials - SuccessMaker calls up step-by-step instruction on certain content when Adaptive Motion determines it is needed.
- Speed Games - In addition to teaching learning with understanding, SuccessMaker Math provides Speed Games to build fluency with math skills.
- Multi-language Translation - SuccessMaker Math includes an enrollment option for all the courses to provide students with a translation tool. The translation language list will be determined by the teachers while creating the course.

Students gain mastery through the application of a weighted performance formula that examines patterns of response

While based on the principles and standards recommended by the National Council of Teachers of Mathematics (NCTM), SuccessMaker Math has been updated to more closely match the standards and the content order of the current educational standards.

## General Pedagogy

The content and structure of the SuccessMaker Math is based on the principles and standards recommended by National Council of Teachers of Mathematics (NCTM) while ensuring

students encounter instruction at the right grade level.

The NCTM and the Savvas advisory boards of well-respected experts in the field of teaching mathematics education recommend that students acquire mathematical content and processes through interaction with a rich and wide variety of engaging problem situations. SuccessMaker Math includes virtual manipulatives in real-world contexts for problem solving.

While NCTM advises the importance of “learning with understanding”, NCTM also strongly advocates the need for “computational fluency”. Mathematical experts contend that without the ability to compute accurately and effectively, students’ ability to solve complex problems is severely impaired. SuccessMaker Math provides students with opportunities to engage in contextualized problems that help them make the connection between computations and their applications.

## Math Initial Placement

Initial Placement (IP) is designed to select a starting level for each student to ensure the student works at an appropriate level. If the IP setting is turned off, the student is directly launched into the SuccessMaker Math default course at the demographic enrollment level selected by the teacher. Custom by skills and custom by standards courses created by a teacher do not leverage IP.

When the IP setting is turned on, the student’s progress is monitored for up to the first 150 exercises during the initial execution of the course and uses that information to place the student at a level that is neither too easy nor too difficult.

After every 30 questions during IP, SuccessMaker Math judges the student’s performance at the current level. One of three decisions can occur as a result of these judgment points:

- If the student performs well, the student’s current level moves up half of a grade level in order to challenge the student. This movement continues until the student changes direction or completes IP.

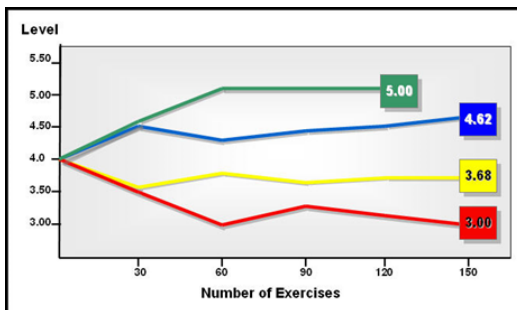
- If the student does not perform well, the student’s current level moves down half of a grade level in an effort to better identify the functional level of the student. This movement continues until the student changes direction or completes IP.
- If the student is functioning with an average performance at the current level, the level will be maintained for another set of 30 exercises after which another judgment is made. At any time a student completes two consecutive sets of 30 exercises with no movement, IP is complete.



When the student’s level is adjusted in the same direction, adjustment is in broad increments. When the adjustment level changes direction, the increments decrease by half to become more refined until IP is complete.

Upon completion of IP, the student is immediately entered into instruction at the IP level. The student has no notification that IP is complete and, if completed in the middle of a session, the session continues until the student signs out or the session time ends. Teachers can access reports showing progress in IP.

### Initial Placement Illustration



### Interpreting the Initial Placement Illustration

All four students are fourth graders as evidenced by their starting level in IP.

- **First student** (green line): This student performed very well during the first 60 exercises where two decisions were made to move the student up by .50 grade level. At level 5.0,

the student performed at an average rate for the next 60 exercises during which two judgments kept the student working at the same level. With no movement forward or backward for two consecutive sets of 30 exercises, IP has compiled enough data to surmise that the student should be working at the current level. Thus, the student whose progress is designated by the green line has completed IP at level 5.00 and will begin coursework at this level.

- **Second student** (blue line): This student accelerated during the first set of exercises, thus, the judgment moved the student's level up by .50 grade level. During the next 30 exercises, the student's progress declined; therefore, the judgment moved the student's level down. Since the student's level changed directions, the movement increment was decreased by half. Thus, the student moved down by .25 level. At the 60-exercise judgment, the student's progress changed direction yet again, cutting the Adaptive Motion increment in half. Therefore, the judgment moved the student's level up by .125 level. The student moved up again at the 90-exercise judgment leaving the Adaptive Motion direction unchanged. Being unchanged, the Adaptive Motion increment was .125 yet again. At the completion of IP, the student moved up .125 level once more making the student's completion level 4.62. The student will begin coursework at this level.
- **Third student** (yellow line): This student did not progress well during the first 30 exercises, and the first judgment moved the student's level down by .50 grade level. The student's progress was much better in the next 30 exercises and warranted upward movement. Since the direction had changed, the judgment moved the student's level up by .25 level. The student's work in the course declined during the next 30 exercises, so the judgment moved the student's level down. Since this was another change in direction, the student's level declined by .125, which is half of the Adaptive Motion increment of the previous 30 exercises. In the set of exercises prior to the fourth judgment, the student's performance improved. Since this was another change in direction, the upward Adaptive Motion increment was cut in half to .0625. During the last 30 exercises, the student's performance remained average. As a result, the student's level

remained unchanged and at the final judgment during the completion of IP, the student was working at level 3.68. The student will begin coursework at this level.

- **Fourth student** (red line): Similar to the third student (yellow line), this student did not progress well during the first 30 exercises and the student's level moved down by .50 grade level during the first judgment. The student's progress did not change and the second judgment moved the student down by another .50 level since the student's movement had not changed direction. The student's performance became better, consequently, the level moved up by .25 during the next judgment. The student's progress declined yet again, so the judgment changed direction and moved the student's level down .125. The student's progress declined once more, resulting in another downward movement of .125 level. The student completed IP at level 3.00 and will begin coursework at this level.

## Math Adaptive Motion Learning Model

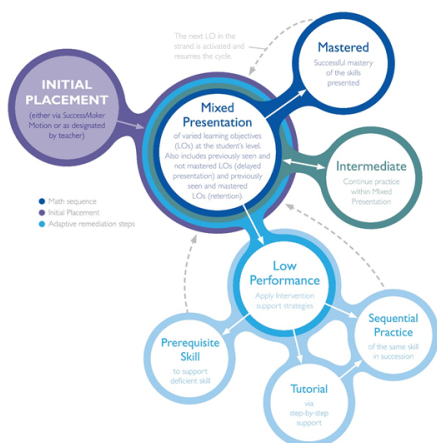
The Adaptive Motion in SuccessMaker directs each student's path through the content. Skill objectives within and across strands are organized into a Mixed Presentation sequence of skill objectives.

- Initial Placement (IP) motion finds the student's appropriate level in the course. This level is suitable for learning, neither too easy nor too difficult.
- The proportion of instruction across concept areas is adjusted for the individual so that weaker areas receive more emphasis, thereby reducing the gap between the student's areas of relative weakness and strength.
- Mastery decisions are based on the probability of the student answering the next exercise correctly, not merely on the student's current percentage of correct answers. The courseware, thereby, responds more quickly to student understanding, resulting in a more efficient use of the student's time.



- Personalized intervention guides individual student learning. When the student encounters difficulties, the system employs various instructional strategies, including sequential practice within the areas of difficulty, presentation of brief tutorials, and/or review of prerequisite material.
- Dynamic sequencing of content adjusts to the individual student. When the student experiences repeated difficulties with new material, the material is set aside (delayed) for subsequent presentation. The goal is to challenge the student without frustrating him, and thereby to keep him engaged in the courseware.
- By periodically checking the student’s recollection of previously mastered material, the system assures the student’s firm basis for further learning.
- The time a student requires to achieve specified gains is estimated and reported to the teacher. The estimate is initially based on the data from past users of the courseware. Then, as the system analyzes the individual student’s rate of progress, it adjusts that estimate. The courseware thus constitutes a learning system that adapts to the individual student. The curriculum structures, Adaptive Motion algorithms, and reporting functions that make this possible are designed to engage the student and assist the teacher. These product features are the consequence of continuous model refinement based on a sustained program of research.

## Adaptive Motion Instructional Model



## Math Intervention Cycle

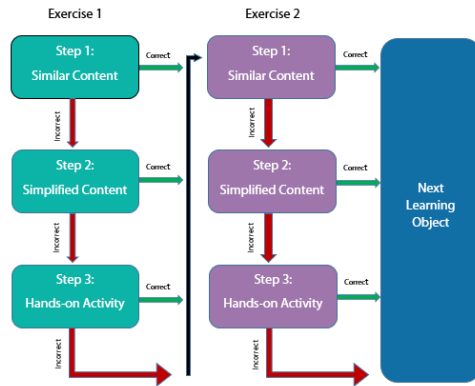
The Intervention Cycle of Adaptive Motion eliminates the random aspects of ordered navigation decisions by weighing the course content and the student's struggles. The Intervention Cycle can be entered a total of three times and includes the following instructional strategies:

- **Sequential Practice:** During Sequential Practice, Mixed Presentation stops and the student receives more exercises of the same type before Adaptive Motion determines the next move.
- **Tutorials:** The Intervention Cycle offers step-by-step tutorials and scaffolded tutorials. Tutorials provide instructions on how to complete an exercise or they can give the student opportunities to experience the skill in another context.
- **Step-by-step tutorials:** Lead the student through three instances of exercises that meet the objective. This explicit instruction and guided practice provided in 100 step-by-step tutorials helps to solidify concepts and problem-solving procedures.
- **Scaffolded tutorials:** Help the student learn a concept by moving the student from concrete activities to more abstract problem solving. Scaffolded tutorials also include an Adaptive Motion that determines if the student needs to be moved back to a more concrete presentation. In Scaffolded Tutorials, the students are presented two, three-step problems to help them learn a concept:

**Step 1:** The student is presented a problem similar to the concept of the skill objective in which they are struggling.

**Step 2:** If the student answers incorrectly, the program assumes that the student needs to have problem simplified or restated.

**Step 3:** If the student answers incorrectly again, the program moves the student into a third step that presents the instruction with concept-building, hands-on activities. This final step relies heavily on virtual manipulatives and visual models.



- Prerequisite Skill: The student then receives exercises from a Prerequisite Skill to reinforce understanding of the current skill.

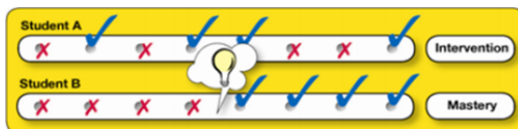
After intervention, the skill is placed back into the mix of exercises being presented through Mixed Presentation. The student has another opportunity in a set of 6-8 exercises to show understanding of the skill.

- If understanding is proven, the skill is marked Mastered (complete) and the student moves on.
- If understanding is not proven, the skill can be placed into Reteach and enter the Intervention Cycle up to three times.

## Math Mastery Assessment

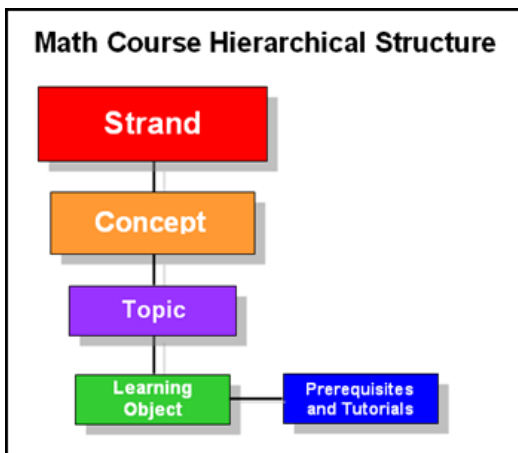
SuccessMaker Math follows the basic philosophy of a probability-based assessment (the likelihood that the student will get the next question correct). If this likelihood is higher than a certain threshold value, then the student is judged to have Mastered the objective. When assessing mastery, the formula explicitly weighs the following factors:

- Pattern of correct/incorrect answers giving the greatest weight to the most recent responses
- Likelihood of a lucky guess
- Difficulty of the exercise
- Significance of the exercise (the degree of relatedness to a terminal objective)



## Math Course Content and Organization

SuccessMaker Math is organized by strands, concepts, topics, and skill objectives (learning objects) for grade levels K-8. Intervention elements are attached to skill objectives.



## Instructional Strands

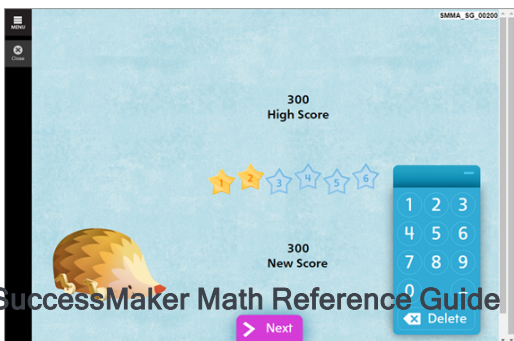
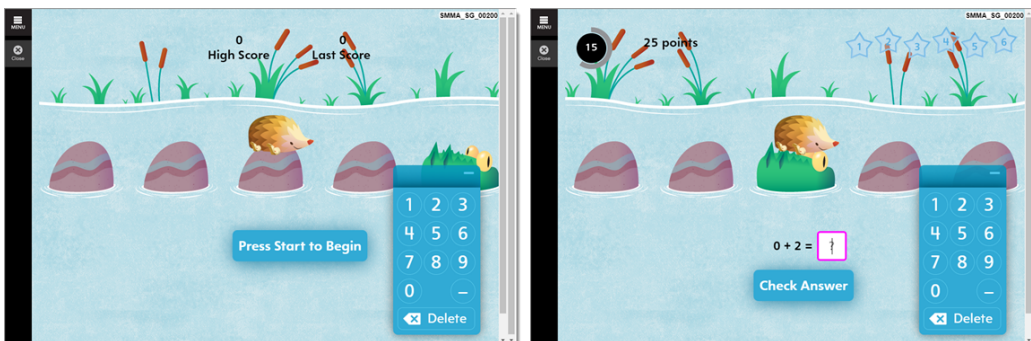
SuccessMaker Math's Adaptive Motion works with a scope and sequence structure based on 16 strands of math instruction.

### Math Instructional Strands

- Addition
- Science Applications
- Decimal
- Division
- Equation
- Fraction
- Geometry
- Measurement
- Multiplication
- Number Concepts
- Performance Tasks
- Probability & Statistics
- Problem Solving
- Speed Games (Fluency)
- Subtraction
- Word Problems

### Speed Games

The Fluency strand employs Speed Games, which enable students to practice their basic math skills in addition, subtraction, multiplication, and division. These exercises build automaticity, allowing students to readily access math facts. The Fluency (Speed Games) strand covers content for grades 2-8, containing a total of 70 exercise sets of 20 facts each.



A score on the screen reports the cumulative score after each correct response. The points received for each correct answer depend on the speed of the student's response.

The stars earned denote the number of times the student has correctly answered five times consecutively.

The character is randomly selected based on the options in the student's age group. The character will not necessarily be the character that the student recently chose to go through their LOs with them. See [Themes and Characters](#) for more information on character selection.

### Scope and Sequence

Although SuccessMaker Math is designed as a self-contained curriculum, you can also customize the content of courses to focus intervention or complement your existing curriculum. You can preview the skill objectives and create custom courses in the LMS. See "Create a Custom Course" in the SuccessMaker Help for more information.

To help you customize course content, supplemental scope and sequence guides are also available on this [SuccessMaker Announcements and Resources](#) website to help you customize course content.

## Hands On Tour: Math

The best way to get acquainted with the SuccessMaker Math course is to take a session. This section shows you what you may see when you sample some exercises in SuccessMaker Math.

## Taking a Session

1. Prepare a sample student user and course for the assignment:
  - Create a student user account. See “Add a Student” in SuccessMaker Help.
  - Choose a course. You can choose the Math (default) course or you can customize a course by settings, skills, or standards, or aligned to a Savvas core program. See “Create a Custom Course” in SuccessMaker Help. To experience Initial Placement (IP), turn on the IP option when you edit the course settings.
  - Assign the course to the student. See “Assign a Course” in SuccessMaker Help.
2. Sign in to SuccessMaker as the student user you created.
3. Select the assigned Math course.
4. As you progress through the course, use a variety of answering techniques to see how the course reacts to your responses, such as:
  - Answer questions correctly and incorrectly
  - Answer correctly on a second attempt
5. Select the **Menu** button in the upper left to display the left menu bar, and then select the various menu buttons to explore the tools and features available to your students. See [Math Student Navigation and Resources](#) for a description of each of the available menu items.
6. During your session, allow yourself to exhaust the idle time for a question. SuccessMaker is monitoring the inactivity (mouse movement, keyboard entry, etc.).

## Math Learning Environment

Students see the age-appropriate learning environments based on their demographic grade level, regardless of the IP level.

- Students in demographic grades 6-12 who are working below 6th-grade level are presented the content in the same age-appropriate environment as their grades 6-12 peers.
- Students in demographic grades K-5 who are working above 5th-grade level are presented the content in the same age-appropriate environment as their grades K-5 peers.



## Themes and Characters

SuccessMaker Math themes consist of introductory animations and an animated character that guides the student through the course. The character also provides feedback for correct and incorrect answers.






When students launch an assignment for the first time, they can choose between various characters based on their demographic grade level.



If students do not choose a character, the default character for that demographic grade level is assigned. Students will see different animations, backgrounds, and characters as they progress through a course. See [Rewards for Progress](#) for more information.

The following table shows the available characters and default character for each demographic grade-level.

Grade Level	Default Character	Available Characters
K	 <b>Wheels</b>	Wheels, Pinky, Socktopus
1	 <b>Pinky</b>	Wheels, Pinky, Socktopus



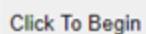
Grade Level	Default Character	Available Characters
2	 <p><b>Socktopus</b></p>	Wheels, Pinky, Socktopus
3	 <p><b>Captain Jack Cavo</b></p>	Wheels, Pinky, Socktopus, Captain Jack Cavo, Flora, Paws
4	 <p><b>Flora</b></p>	Wheels, Pinky, Socktopus, Captain Jack Cavo, Flora, Paws
5	 <p><b>Paws</b></p>	Wheels, Pinky, Socktopus, Captain Jack Cavo, Flora, Paws
6	 <p><b>Pixel</b></p>	Wheels, Pinky, Socktopus, Captain Jack Cavo, Flora, Paws, Pixel, Ultra Cat, Tiki

Grade Level	Default Character	Available Characters
7	 <b>Ultra Cat</b>	Wheels, Pinky, Socktopus, Captain Jack Cavo, Flora, Paws, Pixel, Ultra Cat, Tiki
8-12	 <b>Tiki</b>	Wheels, Pinky, Socktopus, Captain Jack Cavo, Flora, Paws, Pixel, Ultra Cat, Tiki

## Math Student Navigation and Resources

Students use navigation tools and resources as they move through the course using the menu bar on the left. As you move through the session, select each resource to experience its function.

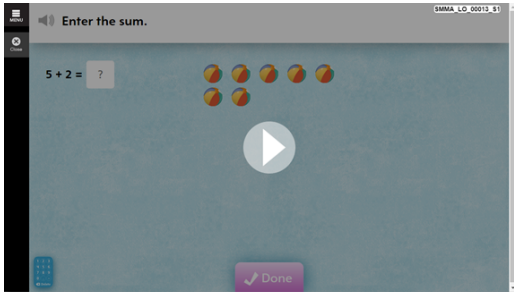
When students launch a math course for the first time a **Click To Begin** button appears. It also appear once per session when the student receives a new reward animation.



Once the student clicks or taps to begin, an introduction video plays followed by a screen where the student has 15 seconds to choose a character before one is chosen for them. After choosing a character, the student clicks or taps on the **Play** button to continue and then the question is automatically read aloud.


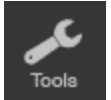






Select the **Menu** button to hide or display the left menu bar.

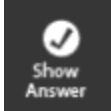





Most resources are available when the student’s assignment uses the default course/assignment settings. If a resource is deactivated, the resource button is unavailable.

The following student resources are available in the left menu bar.

Button	Purpose
	Hides or displays the menu bar for access to the student resources. To access any items on the menu bar, students must select the <b>Menu</b> button.
	Provides options for a <b>Protractor</b> , a <b>Ruler</b> , a <b>Calculator</b> , and a <b>Scratch Pad</b> . See <a href="#">Scratch Pad</a> for more information on using the Scratch Pad.
	Provides access to information for: <ul style="list-style-type: none"> <li>• <b>Formulas:</b> Information for working with shapes: Circle, Cone, Cube, Cylinder, Parallelogram, Pyramid, Rectangle, Rectangular Prism, Regular Polygon, and Rhombus.</li> <li>• <b>Measurements:</b> Information for Area, Capacity (Liquid Volume), Length, Temperature, Time, Volume, Weight/Mass, and Metric Prefixes.</li> </ul>

Button	Purpose
	<ul style="list-style-type: none"> <li>• Symbols: Reference tables for Equality and Inequality, Arithmetic, Geometry, Roots and Powers, and Probability and Percents symbols.</li> </ul>
	<p>Provides definitions and usage examples for glossary terms found in the math course. Students can select <b>Spanish</b> or <b>English</b> from a menu in the Glossary window to view the word and definition in the respective language, and select the speaker icon to hear the word and the definition in the same language.</p>
	<p>Displays a progress report with the student's score, the skills mastered in the current session, and includes an explanation for the score based on the score percentage. You can activate, deactivate, or limit the option using the course/assignment settings. If the option is deactivated or the student has reached the set limit, the report button is unavailable.</p> <p>In the report, the selected character moves across numbered tiles as the student makes gains in the course. The background of the report changes when the student progresses from step 5 to step 6, and then again when the student reaches step 11.</p>
	<p>Provides access to the list of the languages available for the translation. The list will be decided by the teacher while creating the course. The students can translate the contents by selecting any of the available languages from the list.</p> <p>After turning the Texthelp option on at the first time, the translation will be applicable for the default language.</p>

Button	Purpose
	<p>Enables students to ask for help when struggling with a question and provides both visual and audio support.</p> <ul style="list-style-type: none"> <li>• When <b>Show Answer</b> is used, the question is counted as incorrect to ensure an accurate accounting of the student’s abilities and to prevent the student from intentionally skewing the score.</li> <li>• The student can select <b>Show Answer</b> once per LO or once per page of a multiple-page LO. In either case, the LO is scored as incorrect.</li> <li>• If the LO repeats, <b>Show Answer</b> can be used up to three times in the current session.</li> </ul>
	<p>Allows students to exit the course. After selecting <b>Close</b>, a confirmation prompt appears. The student selects Yes to confirm, the session data is saved, and the student is returned to the <b>Assignments</b> page.</p> <p> If the student has opened the <b>Calculator</b> tool, and then selects <b>Close</b>, the end session confirmation box may appear behind the Calculator tool. Click or tap to close the Calculator, and then select <b>Yes</b> or <b>No</b> in the end session confirmation box.</p> <p> Using the <b>X</b> in the title bar of the browser window to close out of SuccessMaker could result in the loss of data.</p>

## Math Student Tools

The following student tools are available throughout the Math course.

## Playing Audio

To replay the audio for a question or feedback, select the **Play** audio button next to the text.



Select the **Pause** audio button again to stop the audio. Select the **Play** audio button again to resume the audio.

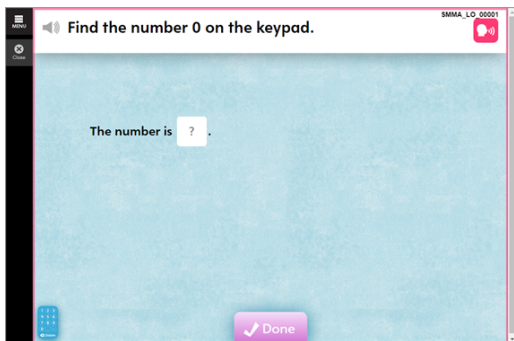


## Multi-Language Translation

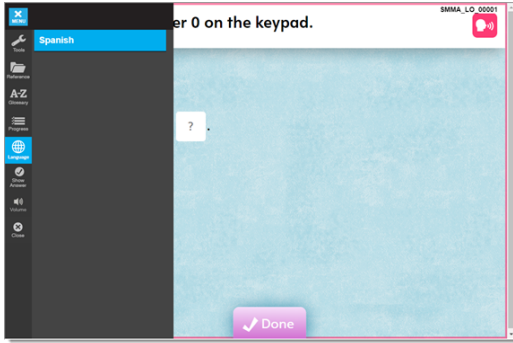
If you have the **Translate** enrollment option turned on for the course, the **TextHelp** icon displays in the upper right corner of the lesson.



Click or tap the **TextHelp** icon to turn on the translation for the question or statement in the default Language which is course specific. The speaker icon turns pink. The page border, to the right of the sidebar turns red.



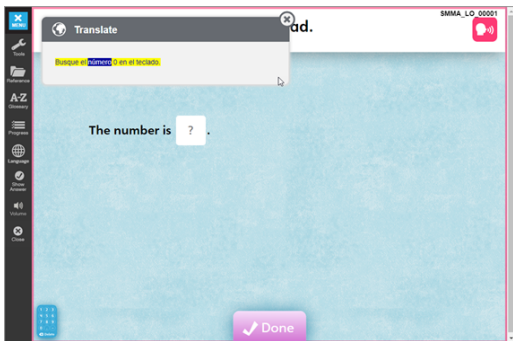
With the translation on, the pink speaker icon appears on the pointer inside the red border. Translated text is displayed to the top left of region marked with red border.



The students can change the translation language by clicking on the ‘Language’ icon in the left menu-bar and select from any of the available languages in the list.

If Spanish language option is provided by the Teacher while creating the course, ‘Spanish’ will be the default translation language.

If Spanish language option is not provided by the Teacher while creating the course, the top one from the available language list will be considered as the default translation language.



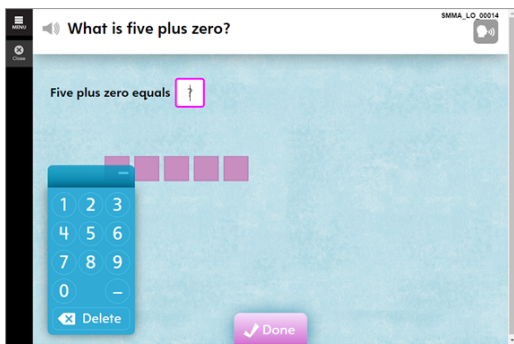
The question is read aloud in the selected language, and the **Translation** window displays the question or statement in the translated text.

Once the student selects any other language and executes at least one learning objective, that language becomes the default for that course unless the student chooses another language. The selected language will be the default for that course throughout the semester until the Student selects a different language.

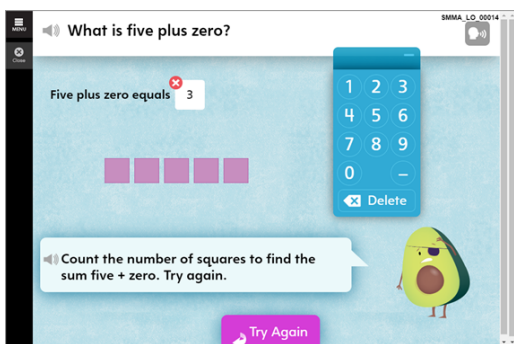
## Keypad Activities

Outside of the student resources, a keypad is also available at specific times. When a computation-based exercise is started, a numeric **Keypad** appears, minimized in the lower-left corner. During a Speed Games exercise, the **Keypad** appears on the right side of the screen.

To answer a question, click or tap in the answer box. The numeric keypad opens and then the student can use the **Keypad** or use the keyboard to enter an answer. Select **Done** to submit the answer.



If the answer is incorrect, a red X appears by the answer entry box, and an animated character presents feedback. The answer is recorded as incorrect, but the student can select **Try Again** to enter another answer.



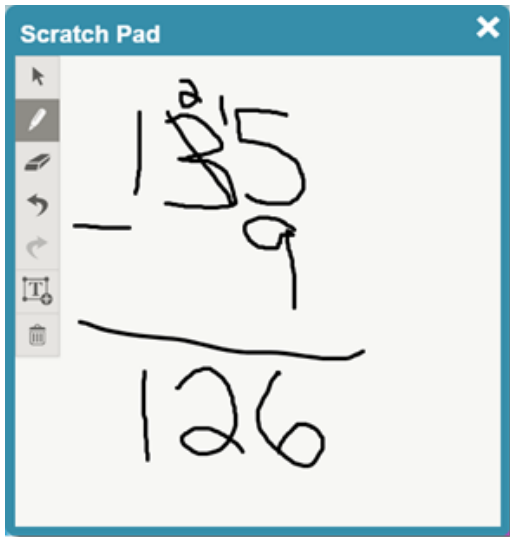
To erase an answer before selecting **Done**, the student can click or tap in the entry box to the right of the number, and then select **Delete** on the **Keypad**.

Drag the **Keypad** to a different part of the screen if necessary, and click or tap the Minimize button in the upper-right corner of the **Keypad** to minimize it.



## Scratch Pad

The **Scratch Pad** feature allow students to “write” out math computations in the learning environment. To open the **Scratch Pad**, select the **Menu** button, select **Tools**, and then select **Scratch Pad**.



Within the **Scratch Pad**, students can use the **Draw** option for writing or drawing, and the **Erase** option to delete the current drawing.

Drag the keypad to a different part of the screen if necessary, and select the **X** in the upper-right corner to close the **Scratch Pad**.

The teacher can turn the **Scratch Pad** setting on or off at any time as often as necessary for a custom course, group assignment, or student assignment. When the **Scratch Pad** setting is off, the menu option is dimmed, and unavailable for selection. If the **Scratch Pad** setting is changed while an assignment is in progress, the change will be visible the next time the course is launched.

## Tutorials

When available, the **Tutorial** icon displays at the bottom of the left menu. Tutorials may present a video or a step-by-step exercise of the solution similar to the student’s exercise.

Tutorials do not alter the student’s score in the session.

To start a tutorial, select the Tutorial icon and follow the instructions. Once the tutorial is complete, the student returns to the exercise.



## Rewards for Progress

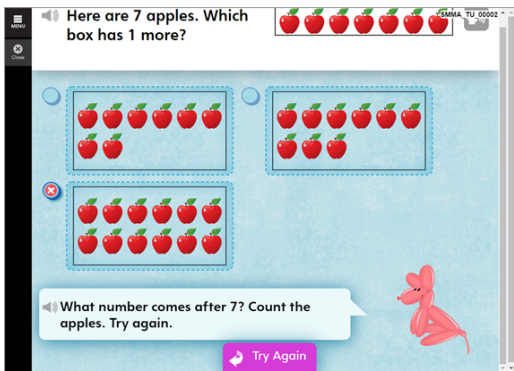
All students using Math default or custom-by-settings courses are rewarded for advancing in the course. At the completion of IP and then every 0.25 gain thereafter, students can select a new character when beginning the next session. The rewards motivate students to take ownership of their learning and progress.

## Math Response Types

To successfully complete interactive assessment items, such as Multiple Choice, Selectable Text or Objects, Drag and Drop activities; students can use a variety of technology-enhanced response item types.

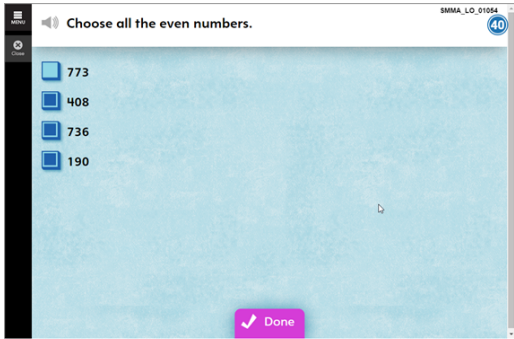
### Multiple Choice Single Select

This item type is represented by a circular radio button next to each answer option and an image in the feedback provides additional support.



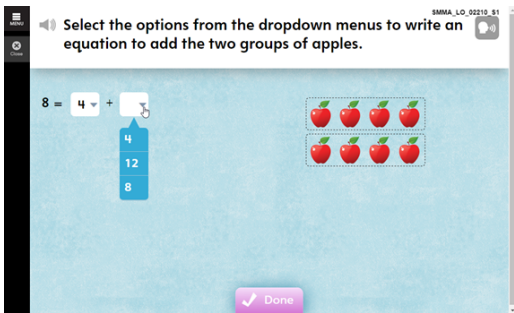
## Multiple Choice Multiple Select

This item type is represented by a square radio button next to each answer option. Instructions and question stems let students know that they are to select more than one correct answer.



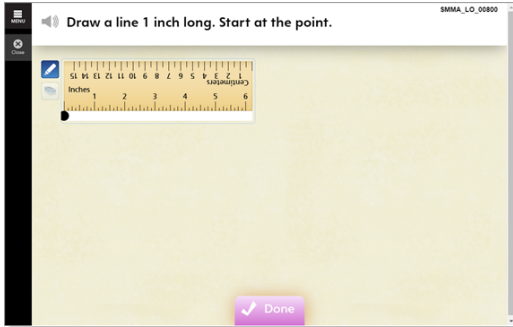
## Drop Down Menu

This item type requires the student to select the arrow next to each answer option, and then select a response from the list.



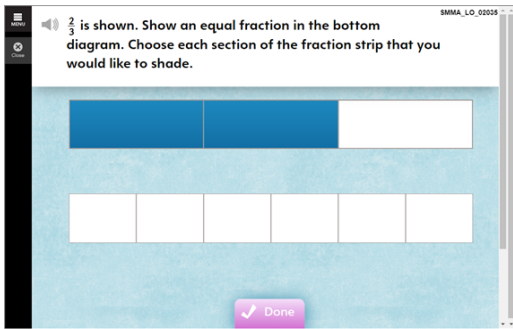
## Drawing Tool

This item type requires the student to use the drawing tool to provide an answer.



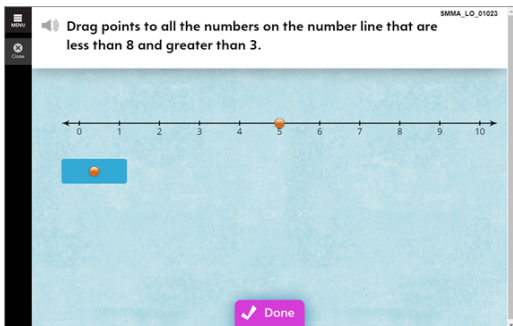
## Fraction Strip

This item type requires the student to fill the fraction strip by selecting one or more sections for the answer.



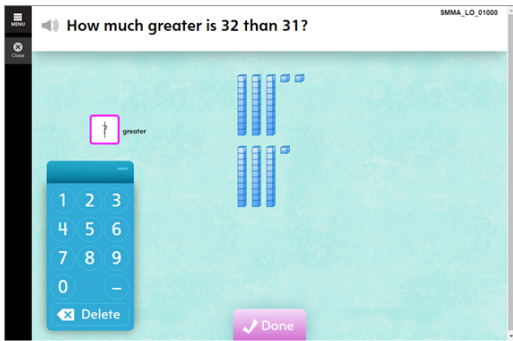
## Numberline

This item type requires the student drag a point to the number line to complete the activity.



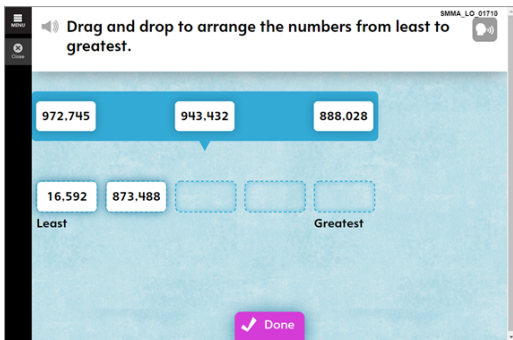
## Number Entry

This item type uses visuals to help the student become familiar with the learning concept and requires the student enter a number in an answer field. Visuals and feedback provide additional support.



## Drag and Drop

This item type requires the student to select a response, and then drag it and release it in the target area.



## Interactive Image

This item type requires the student identify a location in an image and represents the correct answer.



## Math Technical Tips

### Zoom in and Out in the Course

If a student uses a mouse with a scroll button or a keyboard command, such as **Ctrl +** or **Ctrl -**, to zoom in or out while running a math course, the images and buttons in the course may become distorted, preventing the student from moving forward.

### Moving Resources

Most resources, such as the **Keypad**, **Calculator**, **Ruler**, **Glossary**, and **Scratch Pad** can be moved around the screen by selecting and dragging the item. This can be helpful if the item is obstructing the view of question or feedback text.

### Session Time and Idle Time

SuccessMaker monitors idle time when there is no mouse movement, keyboard, or touchpad activity, etc. The Idle Timer displays 60 seconds prior to the expiration of the set Idle Time. For example, if the Idle Time is set at five minutes, the pop-up appears at four minutes and remains for 60 seconds unless action is taken.

### Ending a Session

When a session expires, is closed due to inactivity, or is ended by the student:

- Learning objects completed within a session are recorded.
- Incomplete learning objects within a session are saved. When the student revisits the assignment, they will begin on the last unanswered question. Results for the learning object are only recorded once it has been completed.

## Session Expires

When the session time expires, SuccessMaker shows the student their progress made for the session, signs the student out of the course, and then returns the student to the **Sign In** page.

## Session Closed for Inactivity

If a session is inactive for more than 30 minutes, the session is closed and the student is returned to the **Sign In** page.

## Session Closed by Teacher or Student

Students can end a session by selecting the **Close** button in the menu. After selecting **Close**, a confirmation prompt appears. The student selects **Yes** to confirm, the session data is saved, and the student is returned to the **Assignments** page.



Using the **X** in the title bar of the browser window to close out of SuccessMaker could result in the loss of data. You should always close the course with the **Close** button, and sign out of SuccessMaker when finished running the courseware. If the browser window is abruptly closed, or a student on an iPad<sup>®</sup> presses the Home button twice, and then swipes up on the browser window in which SuccessMaker is running, session data may be lost, the student left online, or the license may be left "in-use" for up to 30 minutes. This can prevent other students from being able to sign in and run the courseware during that time.

## Accessing Math on a Mobile Device

In general, students running the SuccessMaker courseware on a supported mobile device can use standard gestures common to most mobile devices with touchscreen capabilities.

See the **Mobile Access Guide** for additional information and tips about using the courseware tools and navigation on mobile devices.

## Preparing for Use with Students

The effective implementation of SuccessMaker Math in a lab or classroom setting involves careful scheduling of computer time and proper attention to the procedures provided by the LMS. This chapter outlines what is required to start students in the system and gives you some ideas about scheduling in your classroom. Consult your school's system administrator about adding your students to the system and assigning the courses you have selected.

### Getting Students Started

Getting your students started with SuccessMaker Math involves several steps including:

- Selecting the course/assignment settings
- Assigning the course
- Introducing them to the Student Resources before they begin their first session.

### Selecting the Course or Assignment Settings

SuccessMaker gives you the flexibility to change the course or assignment settings. Students can be assigned the Math default course with IP active or custom courses for which you have selected the settings, skills, or standards, or aligned to a Savvas core program.

### Setting the Session Length

You can use the Math default course session length of 15 minutes or you can edit the session length. The default session length is based on the optimum average learning time for students. If you customize the course, the session length can be set from 5 to 180 minutes. You can edit the course and assignment settings for SuccessMaker Math using the LMS. See "Create a Custom Course" and "Edit an Assignment" in the SuccessMaker Help.

### Assigning the Course



Step-by-step procedures for assigning courses to students can be found in the SuccessMaker Help. You will need to be familiar with the following functions:

- Creating groups
- Adding new students
- Selecting the proper starting level
- Assigning the course to newly created groups
- Assigning a custom course

### **Customizing Course Settings**

Teachers can customize the course settings for students by changing the course parameters, such as session length and timing settings.

### **Scheduling Students in the Course**

The default session length for this course is 15 minutes. This gives the average student enough time to complete a full lesson. When using the course in its default state without customizing by skill or standard, scheduling should ideally be 15 minutes. If you need to dictate the scheduling, you can adjust the session length using the course settings.

### **Introducing the Course to Students**

Before your students begin their first SuccessMaker Math session, introduce them to some features of the computer and of the course. It is a good idea to take your students to a computer station and review hardware and software features with them in a hands-on activity.

Demonstrate the equipment the students will use at the computer, such as the headphones, mouse, and keyboard. Also show the software features of the course, such as using the left menu bar to navigate through the course. See [The Learning Environment](#) for more information.

In addition to providing students with quality learning time, SuccessMaker Math helps you improve the instructional experience by providing on-demand performance data.

## Assessing Student Progress

The SuccessMaker LMS gives you a variety of tools to view student progress in SuccessMaker Math.

Reports are the primary means of monitoring student progress in the course. They provide the data you need to measure student progress and intervene when necessary. They also enable you to assist your students in several ways, including:

- Monitoring individual student performance over short-term and long-term periods
- Identifying each student's strengths and weaknesses and planning appropriate instruction or intervention
- Reporting and comparing long-term student progress within student groups or between classes

As each student progresses through the course, the LMS maintains continuous records on the student's performance which it then uses to make decisions about the student's path in the course. The performance data is stored for each student and displayed in the **Performance** tab of the **Students** module, in the **Mastery** module, and in the reports.

See "Mastery", and "Reports Overview" in the SuccessMaker Help for details.

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