

## Student Installation and Login

### Desktop or Laptop computers

Access the program via the web at [mysymphonymath.com](http://mysymphonymath.com)

Type in your schools Symphony Account # \_\_\_\_\_

Type the student's username and password.

Symphony Math will also run on Google Chrome touch screens.

Account #
Username
Password
<b>SIGN IN</b>

### Tablet Apps

Search for **Symphonymath** (no gap) free to download apps from your Apple/Google Play store for:





### System requirements for Symphony Math



Symphony Math works in most major browsers and operating systems, but requires the Adobe Flash Player plugin version 18 or higher. A persistent internet connection is required 200K/min.

A full set of requirements for the program and Flash plugin are available on the Symphony Math site at [symphonylearning.com/support/technical-requirements/](http://symphonylearning.com/support/technical-requirements/).

### Help for students

 If students click the ? button (top left of screen), a pop up window will demo an example of how to use the activity (click 'x' to exit). It's a good idea for students to view a demo before they try to answer questions in a new activity.

 For help working out a specific answer, students can click on the 'life saver' icon (top right of screen). The program will then provide hints that help the student to solve the problem without immediately giving the answer. The student may also be scaffolded to receive more practice on this skill if required.

 This button goes back or exits the program.  This button will toggle full screen on/off.



### Worksheets

Teachers can access Extra Practice Worksheets that provide practice on the skills learned online. These are especially important for use when a student has struggled with the skill online.

There are also Extension Worksheets available for use at the end of completed Stages that help students to transfer the skills learned online to other math situations.



## 26 Stages of Math Skills

Symphony Math teaches School Years 1 to 6 'Number' skills. Mastery of 'Number' is essential to development of higher level math skills. NZ National Standards indicate 'Number' should be the focus for 60-80% of math curriculum in years 1 to 4, 50-70% in years 5 to 6, and 40-60% in years 7 to 8.

Symphony Math is presented in an age neutral interface that is appropriate for use by older students as well.

1. The Number Sequence	14. Introduction to Fractions
2. More/Less/Same	15. Multiply and Divide to 100
3. Add and Subtract to 5	16. Multiply and Divide with 1/10/100
4. Ten as a unit	17. Add and Subtract Unit Fractions
5. Comparing Numbers	18. Non-unit Fractions
6. Add and Subtract to 20	19. Decimals
7. Tens	20. Improper Fractions
8. Add and Subtract with 10s	21. Standard Algorithm: Addition & Subtraction
9. Hundreds	22. Expanded Form Multiplication/Division
10. Add and Subtract with 100s	23. Multiplying Fractions and Whole Numbers
11. Foundations for Multiplication	24. Magnitude and Place Value
12. Regrouping with 2- and 3- digits	25. Decimals to Thousandths
13. Multipliation and Division	26. Advanced Multiplication/Division

## How Symphony Math Works

Most students start on Stage 1 with short placement type questions, regardless of age or ability. If they answer correctly they move on to the next Stage within 3 to 4 minutes, and so on. When they start to make mistakes they start to work on practice skills from that level. As they work, extra practice is automatically given if needed, while those who already know a skill will move up more quickly, so each student has a personalised experience.

Working on the early stages of the program helps students to learn to use the program, and ensures they really do understand some of the foundation skills built upon at higher levels – however teachers can opt to turn off Stages if they prefer.

## Symphony Math teaches math concepts – not just facts

When students use Symphony Math, they aren't just practicing their facts: they are mastering BIG IDEAS that must be understood in order for them to succeed in higher level maths. Mastery is accomplished in several ways:

**Conceptual Understanding:** Students represent each BIG IDEA through the use of different visual tools, like Dot Cards, Number Lines, and Counting Bars. And when they master these tools, students connect them to traditional number sentences, and then use them to solve real-world problems.

**Fluency:** Successful math students also need to be able to solve common math facts quickly and accurately. Timed mastery rounds help to develop fast recall of basic addition, subtraction, multiplication, and division facts.

**Adaptive Branching:** Symphony Math constantly monitors student's performance to provide the best material for them. If students struggle, they are given extensive tasks that challenge them to truly master the BIG IDEA.

## Math Mastery is Hard Work

Throughout Symphony Math, students are constantly challenged to demonstrate their mastery by constructing models, building number sentences from story problems, and building fluency in their basic facts. It's hard work, and students must use the program regularly to expect results.

The payoff is worth the effort. Students who work hard in Symphony Math will gain a solid foundation that will help them succeed in higher level mathematics.

