

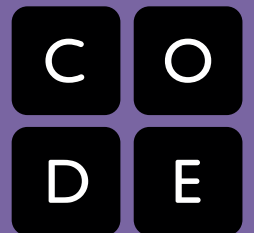
# Welcome to our Family!

Code.org  
Professional  
Learning  
Program

2016-2017

Computer Science  
in Algebra

*Powered by  
Bootstrap*





Dear Educator,

Congratulations! You are now part of Code.org's family of teachers working across the United States to bring computer science courses to our public schools. As the founder of a young and relatively small organization, I've been humbled by the passion of educators such as yourself, taking the first step to bring computer science to your students and to open a world of opportunity for them.

Over the next several months, you'll participate in Code.org's Computer Science in Algebra (CS in Algebra) Professional Learning Program, a program providing professional development and curriculum powered by Bootstrap. You'll work with colleagues and facilitators through the ten lessons of Course A of the curriculum, teaching algebraic and geometric concepts all through a visual computer programming language designed to help students better understand algebra. By shifting classwork from abstract pencil-and-paper problems to a series of relevant programming problems, CS in Algebra demonstrates how students can apply algebra in the real world using an exciting, hands-on approach for students to create something cool.

We look forward to working with you toward successful completion of our CS in Algebra Professional Learning Program. It is important that you read and understand the Code.org welcome kit as it gives key details about our program that you can reference as you go through the one-year program.

If at any point throughout your professional learning experience you have a question, please let us know by e-mailing [teacher@code.org](mailto:teacher@code.org).

Thanks for joining the movement,

A stylized, handwritten signature in black ink that reads 'Hadi Partovi'.

Hadi Partovi  
Co-founder, CEO  
Code.org

## Professional Learning Program overview

The Code.org CS in Algebra Professional Learning Program is a year-long, multi-phase program designed to provide educators the opportunity to increase content knowledge, skills, and pedagogy related to inquiry, equity, and specific Code.org course instruction. The program model is structured to empower teachers by focusing on proper preparation, in-depth learning, feedback, reflection, and continuing education.

### Program commitments

Phase 1: Online Introduction	Phase 2: Blended Summer Study	Phase 3: Academic Year Development
May 2016	Summer 2016	September 2016 - May 2017
<ul style="list-style-type: none"><li>• 2 hours online, self-paced</li></ul>	<ul style="list-style-type: none"><li>• 2 days in-person (14 hours)</li></ul>	<ul style="list-style-type: none"><li>• 1 day in-person (7 hours)</li><li>• 2 hours online, self-paced</li></ul>

## CS in Algebra curriculum

Code.org has partnered with Bootstrap to develop a curriculum which teaches algebraic and geometric concepts through computer programming. The two ten-hour courses focus on concepts like order of operations, the Cartesian plane, function composition and definition, and solving word problems. By shifting classwork from abstract pencil-and-paper problems to a series of relevant programming problems, Code.org's CS in Algebra demonstrates how algebra applies in the real world, using an exciting, hands-on approach to create something cool.

The Professional Learning Program prepares teachers to implement Course A, the first 10 hours of the CS in Algebra curriculum. These lesson sets are meant to be interwoven into pre-existing Algebra courses and will not add substantial instructional time. Each lesson is designed to be implemented in a standard 45-50 minute class period. These lessons are topical and should be used within the natural context of the class. All lessons are aligned with common state standards in math and the CSTA computer science standards.

Download the **CS in Algebra** curriculum and other resources here: [code.org/educate/algebra](https://code.org/educate/algebra)







## Overview of program phases

The Code.org CS in Algebra Professional Learning Program is broken into three phases. These phases are designed to support Algebra teachers throughout their first year of implementing the CS in Algebra curriculum.

### Phase 1: Online introduction

**Overview:** The first phase of professional learning is a two-hour online introduction that focuses on providing a foundational knowledge of the Code.org program and CS in Algebra course resources. It creates a space for participants to become familiar with the curriculum, the platform, and the tools that will be used in the course.

### Phase 2: Summer study

**Overview:** The second phase of professional learning is a 2-day workshop, the primary capacity building experience for teachers prior to their first year of instruction. Focusing on quality math and computer science pedagogy, teachers will gain practical experience teaching content through inquiry and equity. Participants will address common misconceptions about the intersection of math and computer science, interact hands-on with the core concepts of CS in Algebra, and role-play lessons using the Teacher/Learner/Observer Model. The workshop cultivates a professional learning community that will extend throughout the Code.org partnership.

## Phase 3: Academic year development

**Overview:** The third phase of professional learning is composed of an in-person workshop and online modules.

- **In-person workshop:** The one-day workshop will continue to build pedagogical strategies and help teachers prepare for the implementation of the modules. Teachers will review best practices for integrating modeling and simulation into Algebra classes.
- **Online modules:** These online modules allow you to practice with the concepts that your students will be learning while picking up pedagogical tips and best practices along the way.

## Frequently asked questions

I'm not an Algebra teacher. Can I teach this course?	No. The concepts in this course align with Algebra concepts. It will be difficult for a teacher who has not taught Algebra to get through this program.
What supplies do I need to teach the course?	<ul style="list-style-type: none"><li>• General Ed classroom with 1:1 media carts OR Computer lab with 1:1 computers (2:1 can be used for pair programming)</li><li>• We work hard to build an environment that is supported by all modern web browsers on desktops and mobile devices, but you'll have the most success with an up-to-date browser (IE11+, Firefox, Chrome, Safari).</li><li>• Student workbooks, ~20 pages printed by teacher</li></ul>
What are the tech requirements for this course?	Visit these links to make sure your device and browser can support the program requirements: <a href="https://code.org/educate/it">https://code.org/educate/it</a> <a href="https://support.code.org/hc/en-us/articles/202591743">https://support.code.org/hc/en-us/articles/202591743</a>

## Helpful links

- **CS in Algebra Homepage:**  
<http://code.org/educate/algebra>
- **CS in Algebra Professional Learning Program Home Page:**  
<https://code.org/educate/professional-learning/cs-in-algebra>

