# HOUR OF CODE

# Math Self-Tutorials for Students

WOLFRAM PROGRAMMING LAB

## Sound of PI
Wolfram Labs
Grades 6+ | Wolfram Language

In this activity, there are a series of steps with code ready to run. Students start with a piece of code that works, and then modify it to do different things. Students can play melodies based on the digits of PI and explore what PI sounds like using many musical instruments.

**Start**

https://hourofcode.com/wolframspi

## The Coordinate Plane
Codesters
Grades 6-8 | Blocks, Python

In this lesson students explore all four quadrants of the coordinate plane! They use Python and our drag-to-text toolkit to send a sprite to various locations on the stage! There are demonstration and debugging activities included to help students become comfortable with navigating the coordinate plane.

**Start**

https://hourofcode.com/codesterscp

Teacher notes: https://goo.gl/Hf1ckb
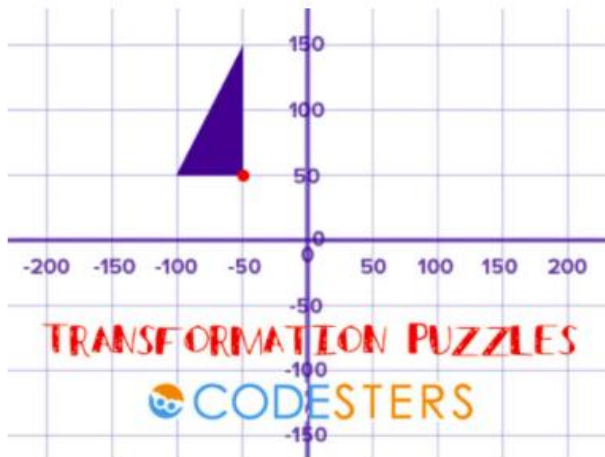
## Geometry Jumper

Hopscotch

Grades 2-8 | Hopscotch | iOS app

Create your own version of the highly-engaging Geometry Jumper game in Hopscotch's open-ended programming environment! Along the way, you'll gain hands-on experience with concepts like sequence, loops, variables, and debugging. No prior experience is needed to complete or facilitate this activity; it includes a fun in-app video tutorial and a step-by-step facilitation guide.

**Start**

https://hourofcode.com/hopgeo

Teacher notes: https://goo.gl/eTAQsf

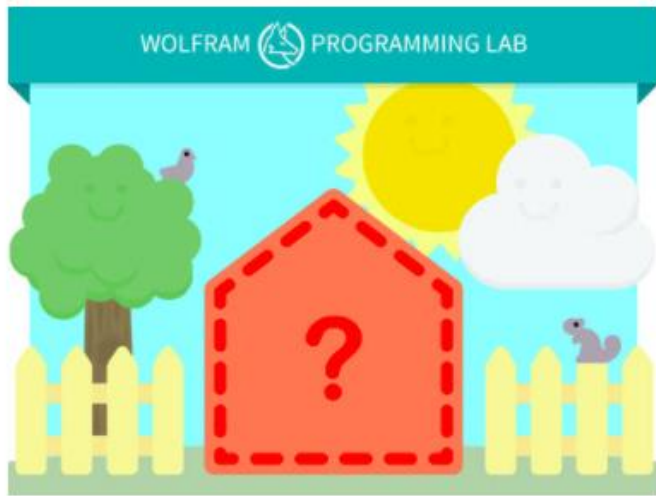## Transformation Puzzles

Codesters

Grades 6-8 | Blocks, Python

In this activity, students use Python to practice performing transformations on the coordinate plane! The lesson includes demonstrations, direct instruction, and challenges that ask students to program and identify various static transformations!

**Start**

https://hourofcode.com/codesterstp

Teacher notes: https://goo.gl/xSxPZL

**Draw a Polygon**
Wolfram Labs
Grades 6+ | Wolfram Language

Explore creating different polygon shapes in this activity.

Start

https://hourofcode.com/wolframp



**Draw a Sphere**
Wolfram Labs
Grades 6+ | Wolfram Language

Explore 3D graphics in this activity and create your own shapes.

Start

https://hourofcode.com/wolframsph