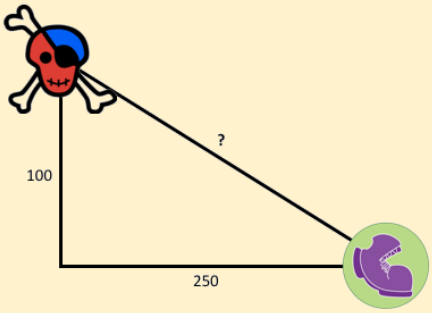
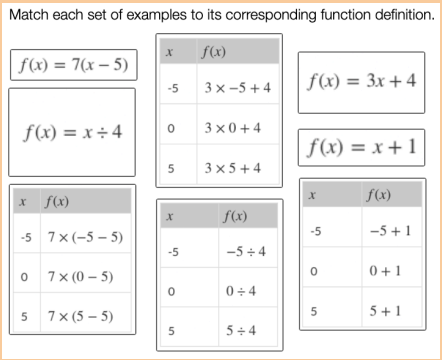
BOOTSTRAP

Computing Creatively + Thriving Mathematically

Materials for Teachers using Connected Mathematics (Grade 8)

Like CMP3, Bootstrap is field-tested and research-validated, with a focus on deep exploration that supports and engages all kinds of learners. Our integrated computing modules have been proven to support math transfer and can be mixed and matched to supplement what you're already doing in your classroom. *Teaching 8th grade math with Bootstrap also addresses many CS Standards, including: 2-AP-11, 2-AP-17, 2-AP-19, 2-AP-21, 3A-DA-11, 3A-AP-14, 3A-AP-17, 3A-AP-18, 3B-DA-05, 3B-AP-14 and 3B-AP-21.*

CMP3 Unit	Integrated Computing Lessons that can extend the CMP3 Unit
Butterflies, Pinwheels and Wallpaper: *Symmetry and Transformations*	Function Composition • Simple code allows students to experiment with rotating, scaling, and reflecting shapes and images from the web. • Practicing transformations with their own names is highly motivating. • In seconds, students can adjust and get rapid visual feedback on the degree of rotation, scale factor, distortion, orientation and composition of shapes, supporting them in developing a concrete understanding of transformations. 
Looking for Pythagoras: *The Pythagorean Theorem*	Distance in Video Games • Looking for a new project to enrich your curriculum? Bootstrap:Algebra offers students the opportunity to program their own basic video games! • video games use distance to determine whether a collision has occurred, offering an authentic application for using a formula that can feel abstract to students. • This lesson offers lots of materials to scaffold connections between the Pythagorean Theorem and distance on the coordinate plane. • *These materials can be used without committing to the full video game project.* 
Function Junction: *The Pythagorean Theorem*	Function Notation • Looking for more scaffolding around function notation? We've got you covered with worksheets and Desmos card sort activities! • This lesson makes connections between functions that generate images in the programming environment to function notation in math. 

Excited to learn more? Our materials are free of charge, and we love training teachers to use them! Sign up for a workshop today!

Created with support from: National Science Foundation WHERE DISCOVERIES BEGIN