

YES

the summer of *yes!*

# Say Yes to Summer Math Gains

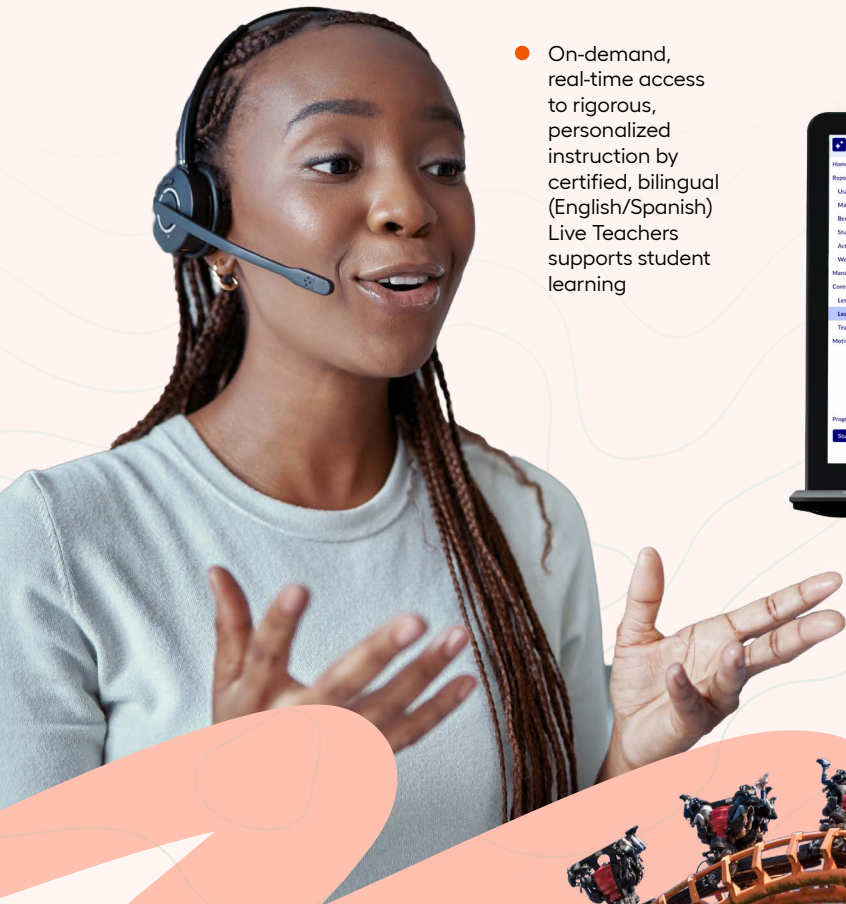
Prepare and motivate students for fall with  
summer pathways in Imagine Math®



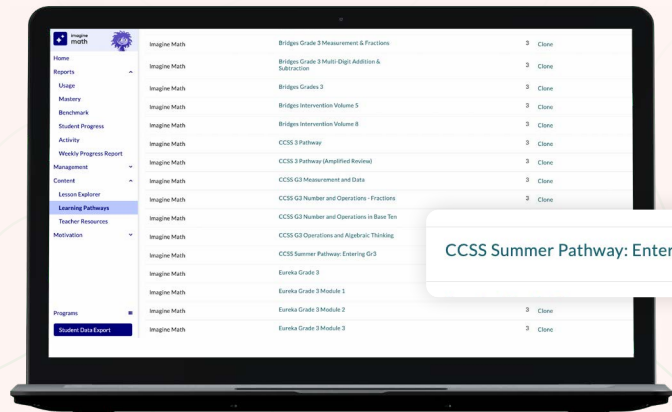
YES

# Give Students Grade-Level Confidence for Fall Math Classes

Imagine Math is an adaptive learning solution that delivers rigorous, age-appropriate supplemental math instruction for PreK through high school. Supported with resources for both online and offline learning, all Imagine Math students will experience summer learning gains whether in school or at home.



- On-demand, real-time access to rigorous, personalized instruction by certified, bilingual (English/Spanish) Live Teachers supports student learning

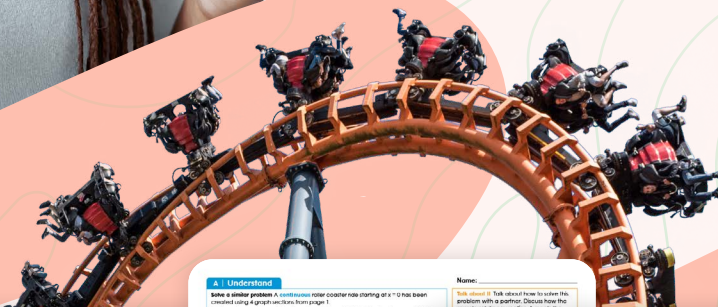


CCSS Summer Pathway: Entering Gr3

- Dedicated summer pathways review key skills from the current grade and preview new learning to prepare students for the upcoming school year, all aligned to your state standards. Summer pathways are available starting in grade 3.



- Real-world applications and project-based learning with STEM-Focused Application Tasks activate math skills



**Background**

A roller coaster car goes up and down along hills as it travels across the coast track. To begin with, the car is pulled to the top of the first hill by one means or another. As it pulls, the car's potential energy (PE) increases. As the car descends the first hill, its potential energy decreases as it is converted to kinetic energy (KE). The roller coaster car has the maximum amount of potential energy at the highest point, right before it is released to begin the ride.

Energy cannot be created or destroyed, but it can be converted into different forms. With this in mind, you will note that when the roller coaster car begins to move down the track, the car's potential energy is being converted into kinetic energy as it moves.

As the roller coaster car moves through the track, its potential energy will be converted into kinetic energy as it moves.

**Think about it!** How is a type of model similar to and different from a real roller coaster? Why might a model be convenient to use? Use being words and give your answer.

A real roller coaster and the model are similar because:

**A Understand**

Write a similar problem. A roller coaster roller coaster starts at 100 ft and then descends using a parabolic function from a height of 100 ft.

Write the equation for the roller coaster's height in feet as a function of time in seconds.

Graph the function on a coordinate plane. Label the axes and the vertex.

What is the maximum height of the roller coaster? How long does it take to reach the maximum height?

What is the minimum height of the roller coaster? How long does it take to reach the minimum height?

How long does it take for the roller coaster to reach the ground?

**B Organize**

Complete the table for each of your graphs. Fill in the boxes to describe where the height is increasing or decreasing over time for the roller coaster. Then compare the patterns.

Graph	Increasing Height (ft/s)	Decreasing Height (ft/s)
Graph 1	0 to 2	2 to 4
Graph 2	0 to 2	2 to 4

**C Solve**

Complete the table for each of your graphs. Fill in the boxes to describe where the height is increasing or decreasing over time for the roller coaster. Then compare the patterns.

Graph	Increasing Height (ft/s)	Decreasing Height (ft/s)
Graph 1	0 to 2	2 to 4
Graph 2	0 to 2	2 to 4

**D Check**

You can check your work from sections B and C by solving equations to find the vertex coordinates for each graph section. Complete the table for the roller coaster. Then check your own work using the same process.

Graph	Vertex (t, h)	Vertex (t, h)
Graph 1	(1, 100)	(1, 100)
Graph 2	(1, 100)	(1, 100)

**Edition** Create a longer roller coaster ride by using a cubic function instead of a parabola. In addition to showing a greater length of the ride, what other changes will you need to make to your display of the grand finale?



# Flexible Implementation for Your Summer Math Program

Summer-focused professional development available

## SAMPLE WEEKLY SCHEDULES

With summer solutions for both student-driven learning and teacher-led instruction, Imagine Math can support in-person and at-home learning.

### In-Person Learning Model

#### MONDAY

- 📍 Independent Imagine Math learning
  - ▣ Whole-class: computer lab/1:1 devices
  - ▣ Small groups: station rotations

#### TUESDAY

- 📍 Teacher-led instruction: whole class or small groups

#### WEDNESDAY

- 📍 Independent Imagine Math learning
  - ▣ Whole-class: computer lab/1:1 devices
  - ▣ Small groups: station rotations

#### THURSDAY

- 📍 STEM-Focused Application Tasks (grades 3–8)

#### FRIDAY

- 📍 Independent Imagine Math learning
  - ▣ Whole-class: computer lab/1:1 devices
  - ▣ Small groups: station rotations

### At-Home Learning Model

#### MONDAY

- 📍 Independent Imagine Math learning

#### TUESDAY

- 📍 Contextualize vocabulary songs (PreK–2)
- 📍 Flash cards using vocabulary resource (grades 3+)

#### WEDNESDAY

- 📍 Independent Imagine Math learning

#### THURSDAY

- 📍 Imagine Math printables to reinforce math skills (grades PreK–2)
- 📍 STEM-Focused Application Tasks (grades 3+)

#### FRIDAY

- 📍 Independent Imagine Math learning

Plus, optional independent use of Imagine Math Facts daily for at least 30 minutes total per week. Imagine Math Facts® is an award-winning gamified supplemental program that helps students gain automaticity in addition, subtraction, multiplication, and division.









- Unique summertime motivational elements with fun prizes drive student engagement

### Usage Recommendations

Program and Grade	Minutes per Session
Imagine Math PreK–K	15 – 20 Minutes
Imagine Math grades 1 – 2	20 – 30 Minutes
Imagine Math grades 3+	30 – 45 Minutes
Imagine Math Facts grades 1+	10 – 15 Minutes



## Add more destinations to your summer roadmap

-  Personalized Credit Recovery
-  Building an Online Summer School
-  Design Your Own STEM Camp
-  Personalized Reading Aligned to the Science
-  Middle School Concept Recovery
-  Summer English Language Development



Download all the guides at:  
[imaginelearning.com/the-summer-of-yes](https://imaginelearning.com/the-summer-of-yes)



[imaginelearning.com/math](https://imaginelearning.com/math)

877-725-4257 • [solutions@imaginelearning.com](mailto:solutions@imaginelearning.com)