



IMPLEMENTATION GUIDE

Getting Started with Magma Math

Guidance for whole-group, small-group, and independent practice across intervention, enrichment, and extension contexts

Getting Started with Magma Math

Magma Math gives students a digital workspace to represent their mathematical reasoning and gives you real-time visibility into how they solve problems step by step—not just whether they got the right answer. Start the implementation by establishing a shared purpose: students use the platform to show their thinking, and you use that work to identify strategies, surface misconceptions, and decide what to do next.

Log in at app.magmamath.com via SSO (Clever, ClassLink, Google, Microsoft, Canvas, Schoology) and create assignments from the standards-aligned content library. Students log in using SSO, a username/password, or a QR code and land directly on their assignment. The student canvas supports freehand writing, typed responses, and **built-in manipulatives** (number lines, base-ten blocks, fraction bars, place value charts). Students can also **translate problems into 140+ languages** and use **text-to-speech in 40+ languages** to hear problems read aloud—introduce these supports as part of your startup routine so students know they're available.

The screenshot shows the Magma Math interface. On the left, a sidebar displays a pig icon and the problem text in Spanish: "Un granjero tiene 24 animales. $\frac{3}{8}$ de ellos son vacas, $\frac{2}{6}$ son gallinas y el resto son cerdos. De los 24 animales, ¿cuántos cerdos hay?". The main workspace shows the same problem in English and Spanish. A student's handwritten solution is visible, using base-ten blocks to represent the problem. The student has written "24 tot" at the top, then "9 cows" and "8 chickens" below it, with arrows pointing to the corresponding blocks. The final equation is $24 - 9 - 8 = 7$ pigs, with "7 pigs" circled. At the bottom right, there is a "SUBMIT" button and a "Answer with numbers" input field.

How Students Show Their Thinking

The student canvas is an open digital workspace that supports the **Concrete–Representational–Abstract (CRA) approach**. Rather than selecting answers from a list, students build their solutions at whatever level of representation makes sense for them:

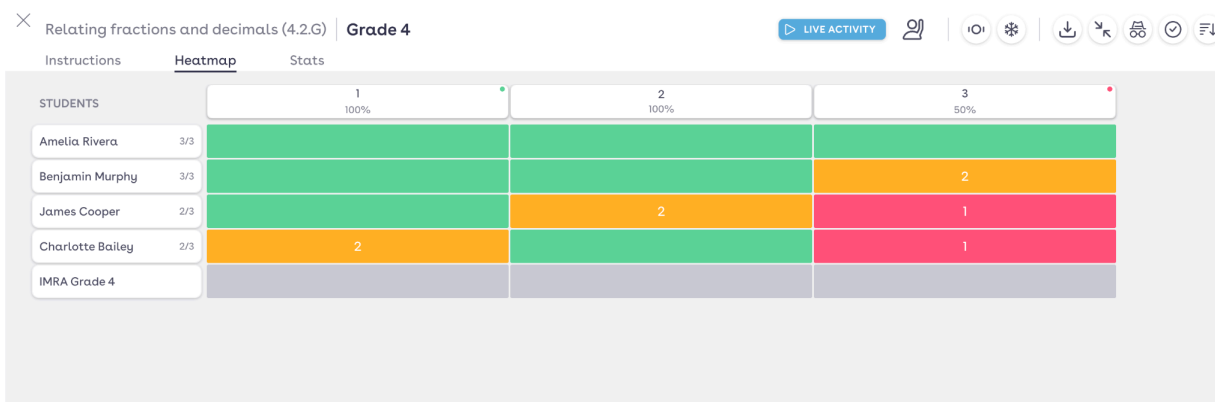
- **Concrete:** Students use built-in digital manipulatives—base-ten blocks, fraction bars, counters, place value charts, algebra tiles—directly on the canvas to model problems visually. For older students, the built-in Desmos calculator (scientific or graphing) supports numerical exploration.
- **Representational:** Students create their own visual representations—drawing number lines, sketching area models, constructing diagrams, and annotating their thinking—to bridge between concrete models and abstract procedures.
- **Abstract:** Students express solutions symbolically using the equation writer or freehand drawing, showing their algebraic or arithmetic steps alongside visual models.

Because every student's work is captured on the canvas, you get a window into their reasoning—not just their answer. This is what makes Magma Math different from a traditional assignment: you can see the strategies students chose, where they got stuck, and how they corrected themselves. That visibility is the foundation for everything that follows.

Whole-Group Instruction

Assign a problem set and keep the **Heatmap** open on your teacher device as students work. It updates in real time and color-codes every response (green = correct first try, orange = correct after retries, red = incorrect). When a red dot appears next to the question number, that's a common error—multiple students making the same mistake—and a signal to act.

- **Project Live Activity** on the classroom screen so students see solutions containing visible thinking appearing in real time. This enhances student engagement and creates a shared mathematical experience.
- Use **Freeze Student Screens** when you need everyone's attention for a whole-group discussion or demonstration.
- **Pin 2–3 anonymized student solutions** that use different strategies and project them for a compare-and-connect discussion. Use the AI-generated Discussion Points to help structure that conversation around what students actually did.



Relating fractions and decimals (4.2.G) | Grade 4

Heatmap > Problem 2

LIVE ACTIVITY

Which fraction represents the four tenths and five hundredths?

CORRECT ANSWER: $\frac{45}{100}$

STANDARD: 4.2.G

SOLVE

Student 1

The denominator has to be 100 because of the hundredths.

$\frac{45}{100}$

$\frac{45}{100}$

Student 2

$\frac{45}{100}$

$\frac{45}{100}$

Student 4

$\frac{41}{10} + \frac{5}{100} =$

$\frac{45}{100}$

AI GENERATED DISCUSSION POINTS

- Compare two methods: rename 4 tenths as 40 hundredths then add 5 hundredths, versus stacking digits 4 and 5 as the numerator. Which explains why the values match?
- Show on a place-value chart why the denominator must be 100. How does renaming tenths to hundredths help avoid answers like $\frac{45}{10}$?

Responding to What You See

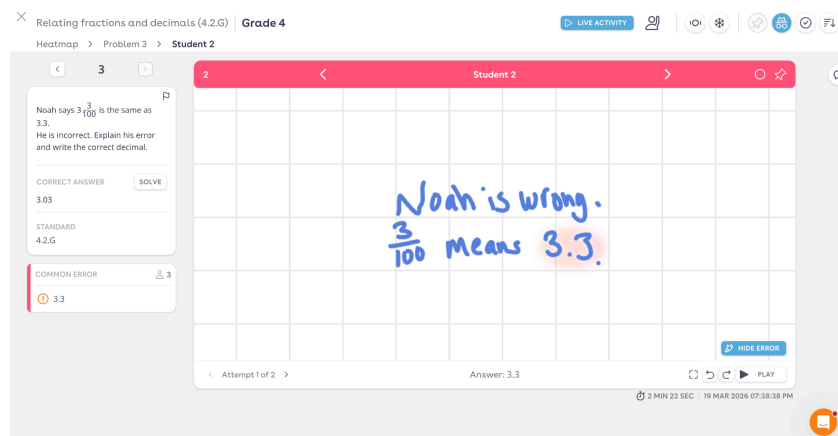
As students work, keep an eye on the Heatmap for patterns. When you spot a common error, click into student work to open the **Solutions View** and see exactly what happened—was it a conceptual misunderstanding, a procedural mix-up, or a misreading of the problem? Use **Playback** to walk through a student's solution step by step. This diagnostic detail lets you respond with precision during the lesson, not just after.

Let the evidence drive your next move:

- If it's a class-wide misconception:** Freeze student screens and address it directly. You can select a student's response to play back for the class as a model, or demonstrate the correct approach yourself in the platform. Use Discussion Points to structure the conversation around what students actually did.
- If an individual student is struggling:** Check the Heatmap—are they needing multiple attempts, stuck on a problem, or struggling across several questions?

Click into their work, watch Playback, and send direct written feedback through the chat bubble.

- **If a small group shares the same gap:** Pull them together for a quick reteach (more on small-group instruction below). Address the misconception, then have them continue working through targeted follow-up.



Small-Group Instruction

Use the Heatmap and **AI Student Summaries** to identify which students share similar misconceptions, then form purposeful groups around those shared needs. You can assign tasks to specific students or groups, not just the whole class.

- Start by discussing the misconception with the group—or with the whole class if the error is widespread. Use the Heatmap to show where the issue is, and have students look at their own work to identify it.
- Then, either select a student's response to play back for the group as a model of how to solve it correctly, or model the problem yourself directly in the platform while students watch.
- Students continue working on problems until they demonstrate understanding. You may create an additional targeted assignment for these students, or they can work through automatically recommended skills in Practice Mode.

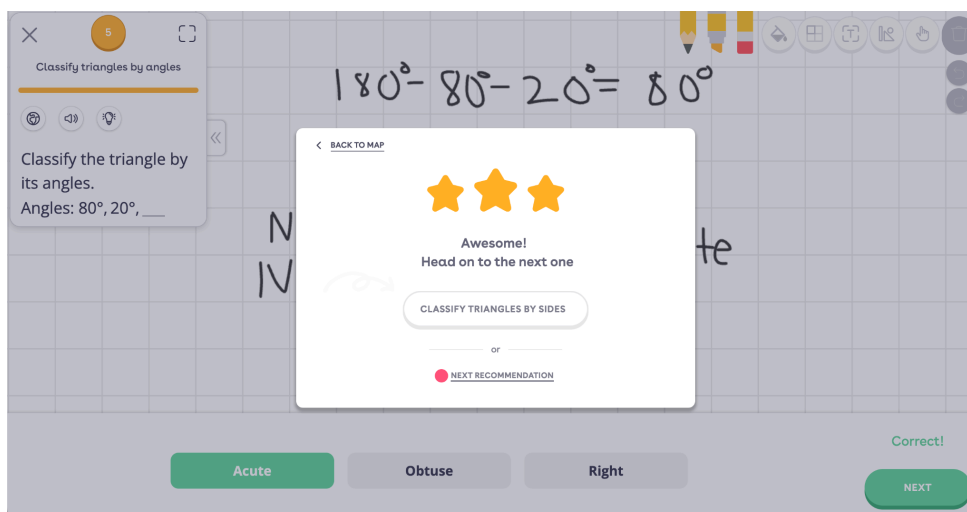
Independent Practice

Practice Mode gives students a self-paced environment to strengthen skills independently. Practice cards are recommended automatically to students based on their performance on assignments—if you want to push a specific practice card to a

student or group, you can do that too. Each practice card includes an instructional video that models a clear strategy for that problem type.

- Students track their own progress with a star rating system and can retry skills as many times as they need, building confidence and ownership over their learning.
- When students get stuck, **Lava**—Magma’s built-in AI hintbot—provides targeted hints that encourage them to rethink their approach without giving away the answer.

The screenshot displays the Magma Math interface. At the top, a 'PRACTICE' window is open, showing a 'Start here!' button and a card for 'SUBTRACT 3-DIGIT NUMBERS (UP TO 1000)' with a star rating and a 'MORE RECOMMENDATIONS' link. Below this, a grid-in response area is shown with the problem $766 - 127 =$. The grid contains the numbers 7, 6, 6 in the top row and 1, 2, 7 in the bottom row, with a minus sign between them. A green circle highlights the second 6 in the top row and the 2 in the bottom row. Below the grid is a 'PRACTICE' button. At the bottom of the interface, there is an 'Answer here' field and a 'SUBMIT' button.



Configuring Support Settings

Open a student's profile to configure their **Support Settings**. Once enabled, these settings apply automatically to **every assignment** the student receives.

Text-to-Speech: Reads problem text aloud in over 40 languages. **Translation:** Displays problems in any of 140+ languages alongside or instead of English. **Calculator:** Grants access to a basic, scientific, or graphing calculator. **Text Size:** Increases font size across all problem text.

Configure these once at the start of the year and adjust as needs change. Every new assignment automatically includes each student's support settings—no extra setup required.

A screenshot of the "Justin Beiber" student profile support settings. The settings are as follows:

- Text-to-speech:** Enabled (toggle switch is green).
- Translation language:** A dropdown menu showing "French". Below it is an unchecked checkbox labeled "Only display problems in the selected language".
- Calculator:** A dropdown menu showing "Scientific".
- Text size:** A slider control with three positions labeled "A", "A", and "A". The slider is currently positioned at the middle "A".

At the bottom, there are two buttons: "CANCEL" and "SAVE".

Advanced Learning and Enrichment

The content library organizes problems into **Mild, Medium, and Spicy** difficulty levels within each standard. When you have students who are ready for more, you have access to Spicy-level problems that ask students to explain reasoning, compare strategies, or work through multi-step challenges—assign these to the students who need enrichment.

- For students who are having an easy time, challenge them to represent their thinking as clearly as possible using different methods. The open canvas lets them annotate, diagram, and write equations—going well beyond selecting an answer.
- Use Playback and the pinning feature to turn the classroom into a shared space where peers can learn about different ways to represent solutions, aiding deeper reasoning and conceptual understanding.
- You can always assign additional Spicy problems to keep advanced learners engaged and deepening their understanding.

The screenshot displays the Magma Math interface. On the left, a problem card titled "First assignment (demo) | Magma Demo class" shows a graph of height vs. duration for a training plane. The problem asks for an equation of the form $y = mx + c$. The correct answer is $y = -4x + 100$. On the right, a student's handwritten solution is shown on a grid. The student has plotted the line, identified the y-intercept as $(0, 100)$ and a point at $(15, 40)$, and calculated the slope $m = -4$ using the formula $m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{40 - 100}{15 - 0} = -\frac{60}{15} = -4$. The final equation written is $y = -4x + 100$. The interface also shows a "LIVE ACTIVITY" button and a timer indicating "MORE THAN 5 MIN" and "20 FEB 2024 12:51:54 AM".

Sustained Supplemental and Course Use

When you're using Magma Math over a longer period—whether for supplemental practice, intervention cycles, or as a course—the **Progress Tab** becomes your central view for monitoring growth. It shows cumulative skill mastery across the school year, lets you view prior-year performance to identify readiness gaps, and visualizes how individual

or class performance changes over time so you can see whether your interventions are working.

- **Standards-based recommendations:** View student performance organized by standard and recommend targeted practice to students who haven't yet achieved mastery. Review progress across multiple assignments to decide whether students need reteach, guided practice, or greater challenge.
- **District-wide consistency:** For school- or district-level implementation, leaders can push consistent assessments to all schools and view centralized data across classrooms and buildings.



Strong implementation comes down to using student work to drive your instruction. Whether you're monitoring the Heatmap during a lesson, reviewing student solutions after class, or tracking growth across a semester, the platform captures how students think—not just what they answered. Establish clear norms with your students: the canvas is a space for showing thinking, trying strategies, and revising work. When students know that's the expectation, and you use what they produce to shape what happens next, Magma Math becomes part of how your classroom learns together.