SCORING AND RESPONSE GUIDE

Interpreting Student Work and Responding

How to read student responses, use scoring data, and plan instructional next steps

How Magma Math Grades Student Work

Magma Math grades every response automatically as soon as a student submits it. Each answer receives a colored indicator: green for a correct first attempt, orange for a correct answer reached after multiple attempts, and red for an incorrect response.

Teachers see results on the **Heatmap**, a color-coded class overview where green indicates a correct first attempt, orange indicates a correct answer after multiple attempts, and red indicates an incorrect final answer. This at-a-glance view lets teachers identify which students need support and which problems are causing difficulty across the class.

When a Response Is Graded as Correct

A response is graded as correct when it is **mathematically equivalent** to the expected answer. Magma Math accepts different representations of the same value by default. For example, if the expected answer is 0.5, a student may enter 1/2 or 0.50 and still receive credit. This flexibility ensures that students are evaluated on mathematical understanding rather than on a single notation.

When a question specifies a required format—such as “write your answer as a fraction”—Magma Math enforces that constraint. In these cases, a mathematically correct answer in the wrong format is marked incorrect, because the question is assessing the student’s ability to express the answer in a particular way. If enabled by the educator, students receive hints when their answer does not match the expected format, helping them recognize and correct formatting issues on their own.

When a Response Is Graded as Incorrect

A response is graded as incorrect when it is **mathematically incorrect** or when it **does not match the format specified in the question**. These two categories reflect different instructional signals: an incorrect answer suggests a gap in understanding or computation, while a format error may indicate that the student did not attend to the full requirements of the problem.

When a student enters an answer in an unrecognized format, Magma Math provides a hint prompting the student to check their formatting. This scaffolding helps students

distinguish between a mathematical error and a formatting issue, reducing frustration and supporting self-correction.

Teachers can **manually override** any automatic score. If a teacher determines that a student's reasoning is sound despite an unconventional response, the teacher can mark the answer as correct. This ensures that professional judgment always has the final word on student performance.

Analyzing Individual Student Work

Beyond right or wrong, Magma Math gives teachers tools to understand **how** a student arrived at their answer. Two features support this analysis:

Playback replays the student's work step by step on the Student Canvas, showing every line, calculation, and edit in the order the student made them. Teachers can watch a student's thought process unfold, identify where reasoning went off track, and pinpoint the exact moment an error was introduced. This is especially valuable for multi-step problems where the final answer alone does not reveal the nature of the mistake.

Solutions View displays a student's complete written work on the Student Canvas, giving teachers a full picture of the steps, calculations, and reasoning behind each answer. Combined with Playback, Solutions View allows teachers to both see the final state of a student's work and trace the sequence of steps that led to it.

Understanding Why a Response Is Incorrect

Not all errors are the same, and effective instruction depends on understanding the **origin** of a mistake. When reviewing student work through Playback and Solutions View, teachers are encouraged to categorize errors into three types:

- **Conceptual errors** — The student misunderstands the underlying mathematical concept. For example, a student who adds the numerators and denominators when adding fractions (writing 1/3 + 1/4 = 2/7) has a fundamental misunderstanding of fraction operations. These errors call for reteaching the concept, not just correcting the calculation.
- **Procedural errors** — The student understands the concept but makes a mistake in execution. For example, a student who sets up a proportion correctly but makes an arithmetic error when cross-multiplying understands the method but needs practice with accuracy. These errors respond well to targeted practice and self-checking strategies.
- **Task-interpretation errors** — The student misreads the problem or overlooks a constraint. For example, a student who solves for area when the question asks for perimeter has the skills but misidentified the task. These errors suggest a need for careful reading strategies and attention to problem requirements.

By identifying the error type, teachers can match their instructional response to what the student actually needs—whether that is revisiting a concept, practicing a procedure, or building habits around reading problems carefully.

Common Error: Catching Class-Wide Mistakes in Real Time

The **Common Error** feature automatically flags a problem when **three or more students** in the class submit the same incorrect answer. This is a powerful signal: when multiple students make the identical mistake, it usually points to a shared misconception or a confusing aspect of the problem rather than individual carelessness.

When a Common Error is detected, the teacher receives a notification and can see exactly which students gave the flagged response. This allows the teacher to pause and address the misconception with the whole class or a targeted group right when it happens—before students practice the error further and before the class moves on.

Common Error turns assessment into a live instructional tool. Instead of discovering after the fact that half the class misunderstood a concept, teachers can catch and correct mistakes in the moment, making formative assessment truly formative.

Reporting by Standard

Magma Math connects every problem to its corresponding Texas Essential Knowledge and Skills (TEKS) standard, allowing teachers to see performance data organized by the standards they are teaching. Two reporting views support this:

The **Stats Tab** shows mastery percentages for each standard based on completed assignments. Teachers can see at a glance which standards the class has mastered and which need additional attention. This data supports decisions about reteaching, grouping, and pacing.

The **Progress Tab** tracks how standard-level performance changes over time, showing whether students are improving, holding steady, or declining on specific skills. This longitudinal view helps teachers evaluate the effectiveness of their instruction and adjust their approach across a unit or grading period.

Together, these reporting tools ensure that scoring data is not just a record of right and wrong answers but a guide for instructional planning aligned to the standards.

Summary

Magma Math provides scoring information at every level: from individual responses on the Student Canvas, to class-wide patterns on the Heatmap, to standard-level mastery on the Stats Tab and Progress Tab. For correct responses, the platform confirms mathematical accuracy while allowing flexible notation unless the question specifies a format. For incorrect responses, teachers can use Playback and Solutions View to determine whether the mistake is conceptual, procedural, or task-based, and then match their instructional response to what the student actually needs. When a Common Error emerges across the class, it serves as a real-time signal to pause and reteach before

moving forward. Teachers always retain the ability to override any automatic score based on their professional judgment. This guide equips educators to interpret every score as actionable information about what students understand, where they struggle, and what to do next.