

# Short Answer

## Teaching Tips



To help foster a supportive environment for feedback, introduce the [importance of feedback](#) and [how to give empathetic feedback](#) with our mini-lessons.



The best questions are open-ended and ask students to **justify** opinions, **analyze** material, **articulate** a thought process, or **evaluate** a claim.



**Avoid** fact-based recall questions.



The best feedback criteria are **positively oriented** and relevant to learning objectives. Criteria can focus on both **content knowledge** and **writing structure**.

- Make students aware of the criteria so they know how to craft their response. Or, have students decide what appropriate criteria would be.
- Emphasize that students have to make a choice about assigning feedback. *Both* or *neither* aren't options!



The best discussion questions ask students to **verbalize their thought process** about the feedback they gave. For example: "93% you said Response 1 explained the concept of photosynthesis better. Can someone share what aspect of the response made you think that?"

- Have students **predict** what results will be.
- Focus discussion on the qualities of the **responses** rather than on the students who wrote the responses.



To promote students' **metacognitive development**:

- Encourage students to **ask themselves questions** during the activity:
  - "Does my response meet all the criteria?"
  - "How did giving feedback improve my understanding of the content?"
  - "How can I improve my response using the feedback I got?"
- Provide clear **time signals** throughout the activity.



To **incorporate feedback in the moment**, ask students to reflect on how they can improve their response after receiving feedback. You may want to take time to have them **revise** their responses, either in class or for homework.

# Pre-Algebra

In all Short Answer activities, your students **create** responses, **compare** peer responses and provide scaffolded feedback, then **converse** results as a class.

Short Answer gets your students the immediate feedback they need through social, engaging peer feedback activities and gets you deeper insight into what your students know.

Short Answer can be used at every stage of your Pre-Algebra lesson plan from lectures to in-class practice.

<b>Bellringer</b>	Get students engaged by using Short Answer to prompt written responses about what stands out from yesterday's class or to preview new material with a warm-up problem.
<b>Check for understanding</b>	Break up lectures with quick feedback activities that get students interacting with one another. Deepen understanding while getting a quicker, more accurate pulse of what they know on an individual level.
<b>Guided practice</b>	Group students together to write responses, solve problems, and give feedback to other groups, or provide a model response in Short Answer.
<b>Independent practice</b>	During Short Answer activities, encourage students to reflect on how their response matches up to the ones voted as the strongest by the class. Invite revision and iteration of responses as another in-class activity, exit ticket, or homework.
<b>Exit Ticket</b>	Complete a quick, one-round Short Answer activity to leave students thinking about the most important points of the day.
<b>Homework</b>	Have students complete writing assignments about core content and bring them in next class for peer feedback activities and discussion to deepen understanding.

 See the following page for two detailed Pre-Algebra use cases with example questions, feedback criteria for students to evaluate responses with, and standards alignments.

# Sample Use Cases: Pre-Algebra

Note: Short Answer doesn't support equation formatting yet, but works well when discussing generalized problem solving strategies and procedures.

## Procedural Knowledge and Problem Solving

**Activity Time:** 5-10 minutes

Use Short Answer to nail down foundational math skills and crowdsource strategies for solving problems, opening up discussion to address common mistakes and misconceptions.

## Sample Questions

- In words, describe the process for making the mixed number  $5.75$  an improper fraction.
- Explain your process for finding the prime factorization of  $156$ .
- Without solving the problem, explain how you would find the area of a pie with a diameter of  $8$  inches.

**Feedback criteria:** efficient; easy to understand; descriptive; accurate

## Standards Alignment Examples

- Construct viable arguments and critique the reasoning of others. (*CC, PRACTICE.MP3*)
- Know the formulas for the area and circumference of a circle and use them to solve problems (*CC, 7.G.B.4*)

## COMING SOON: Solving Problems and Showing Work

**Activity Time:** 10-15 minutes

Have students solve any pre-algebra word problem in Short Answer, then give feedback to peers on how their solution can improve. Bonus points for asking students to write how they solved the problem! (In the future, students will be able to upload a photo of their work.)

## Sample Questions:

- Annika ran a  $26$  mile marathon in  $3$  hours and  $20$  minutes. How many feet per second did she run? Show your work and explain your thought process.
- GG has  $\$22$  in her account and earns  $\$4$  every week. Write a function that describes how much money GG will have after an unknown  $t$  weeks. Explain your reasoning.

**Feedback Criteria:** accurate result; efficient; creative approach; clear explanation of thought process

## Standards Alignment Examples

- Make sense of problems and persevere in solving them (*CC, PRACTICE.MP1*)
- Analyze proportional relationships and use them to solve real-world and mathematical problems. (*CC, 7.R.P.A.1*)
- Construct a function to model a linear relationship between two quantities. (*CC, 8.F.B.4*)