

Struggle Source	Strategy
Difficulty understanding the task and what is being asked	<ul style="list-style-type: none"> • Read the intro box at the top of the Activity as a whole class. Make sure students understand the context before launching them into group work. • Ask: "What is this problem about?" • Consider: "What would this look like without any numbers?"
Not able to get started on a problem, despite having a general understanding of what the problem is about	<ul style="list-style-type: none"> • Give them a few minutes. Don't intervene too early. Think time is necessary for generating ideas. • Ask: "If you knew what to do, what would you do?" • Offer a simple 3-column graphic organizer divided into "What do you know?" "What do you want to know?" and "What's one thing you could try?"
Difficulty with calculations	<ul style="list-style-type: none"> • Offer a tool (such as a calculator) if the calculations themselves are not the main point of the lesson. • Ask: "What would this look like with easier numbers?"
Difficulty accessing <i>prior</i> knowledge	<ul style="list-style-type: none"> • Distinguish between social knowledge and logical-mathematical knowledge when deciding what information to provide. • Plan a warm-up around a certain skill if you think it might be a barrier to the lesson. • Point to a resource (notes from previous lessons, a peer, an anchor chart, Google, etc.).
Not enough time	<ul style="list-style-type: none"> • If students are still actively working through ideas and trying out strategies, give extra time. This is where learning is happening!
Not finding traction in a problem, strategies exhausted	<ul style="list-style-type: none"> • Use a sequence of focusing (not funneling) questions to help generate new ideas. • Allow groups to send a "spy" to check in on other groups (Peter Liljedahl calls this "mobilizing the knowledge" and explains how this fosters student autonomy.)
Difficulty navigating the social component of group work	<ul style="list-style-type: none"> • Use the read-discuss-write protocol to offer structure to the group work. • Chunk the lesson, assigning students to work on a few questions at a time in their groups (rather than the whole front page), then debriefing those questions as a whole class, and then launching them to work on the next few questions. • Scaffold the group work, not the task!

Not able to justify an answer	<ul style="list-style-type: none"> • Ask: "How do you know?" • Have students attempt to first convince themselves, then convince a friend, then convince a skeptic. • Ask for convincing evidence and reasons that would "hold up in court."
Not able to verbally express their thinking	<ul style="list-style-type: none"> • Elicit student thinking with questioning techniques. • Expect student responses to not be tidy, clean, and clear. • Ask other students to restate, revoice, or summarize another student's idea. This helps bring clarity and assigns competence to the student whose idea is being shared.
Not able to represent their thinking on paper	<ul style="list-style-type: none"> • Allow students to make informal sketches, pictures, and diagrams that make sense to them before insisting on a specific model or representation. • Wait to introduce and discuss specific models until the whole class debrief. This is an opportunity for YOU to extend and build on students' thinking. Direct instruction of a helpful model that can be used for reasoning (like an area model or a double number line) is totally appropriate.