



How? Justify.

How did I arrive at my solution? How do I know it's correct?

DEFEND YOUR STRATEGY FOR SOLVING THE PROBLEM		
UNDERSTAND	Definition	Students use objects, drawings, diagrams, or symbols to analyze and justify their solution pathway for a given problem to explain their mathematical thinking to others.
	When to Teach This Strategy	<ul style="list-style-type: none"> • Students should practice this strategy routinely. • Teach this strategy when students get stuck on a problem and need to problem solve to find their error <ul style="list-style-type: none"> ○ Teach this strategy when students have arrived at a solution and need to explain their solution pathway to others
PREPARE	Why We Teach It	Mathematically proficient students need this strategy to make sense of their work and to communicate their mathematical thinking to others.
	Secrets to Success	For students to be successful with this strategy they must be able to <ul style="list-style-type: none"> • calculate accurately and efficiently, • be flexible in their thinking, • be able to explain their work, and • be able to reason abstractly and concretely.
TEACH	How We Teach It	<p>Modeling a think-aloud during the “I Do” focus lesson:</p> <p>Explain to students that they are going to learn a strategy called Defend Your Strategy for Solving a Problem. In math it is important to find a solution, but it is just as important to be able to explain our strategy—the way we solved the problem—to ourselves and to others.</p> <p>This strategy is important because it helps you attend to accuracy and precision in your work. Additionally, it provides you with a tool to help confirm when your work is correct or to recognize and correct it when you’ve made an error in solving. This strategy can be used all the time to help make sure that your work is free of errors.</p> <p>Using the strategy Defend Your Strategy for Solving a Problem looks like this:</p> <p>During the “I Do” focus lesson we present a previously solved problem to students. We model by orally explaining the process we went through to solve the problem. Then we model how the problem could be explained in written form, too.</p> <p>After modeling this strategy in oral and written forms, we provide chances for students to practice by having them solve a problem and explain their work out loud to a partner. Then we have the partners work together to practice writing their explanations on paper.</p> <p>Tell them, “You will know you are using this strategy when you can easily explain how you arrived at a solution, your work makes sense, and your work is regularly free of mistakes.”</p>
		<p>Suggested Language</p> <ul style="list-style-type: none"> • <i>How do I know my strategy makes sense?</i> • <i>How can I explain my strategy to someone else?</i> • <i>Would someone else understand how I arrived at my solution?</i>
SUPPORT	Instructional Pivots	Give students an organizer that provides space for them to fill in <ul style="list-style-type: none"> • <i>what</i> (what needs to be solved?), • <i>why</i> (why my strategy works), and • <i>how</i> (what was my strategy for solving?).
	Partner Strategies	These strategies may provide support before, during, and after teaching this strategy: <ul style="list-style-type: none"> • Distinguish Correct Logic from Incorrect Logic • Use Diagrams, Objects, Etc., to Construct Your Argument for Solving