DEVELOPER

*I encourage **divergent thinking** – and am always <u>generating</u> mathematical arguments and <u>questioning</u> the logic behind assertions of truth.*

Who am I?

You are a relentless investigator in search of the truth. There is no greater joy for you than making connections and sharing your discoveries with others. You see mathematical concepts as inherently beautiful. You inspire your team to examine their own thinking by asking probing questions. Considering ideas from different perspectives is your life's mission and no one is more enthusiastic about sorting through a problem's endless factors than you. You are passionate about making sure each person's voice is heard, valued, and understood, which means that you sometimes have to ask clarifying questions or paraphrase what someone said to help everyone understand what they mean. You work closely with your team's Processor to transform verbal discussion into a unique solution ready for submission.

It is my job to ...

- Construct and justify reasonable mathematical arguments to share with my team
- Identify any potentially confusing or misleading mathematical reasoning
- Analyze and prove the logic behind claims and assertions by exposing what is true (examples) and what is not (counterexamples)
- Lead my team in justifying our collaborative conjectures by asking probing questions
- Evaluate the reasonableness of my team's solution pathway, continually revisiting and redirecting our movement forward accordingly
- Work closely with my team's Processor to maintain a welcoming and inclusive environment, where all members of the team feel encouraged to take risks

I ask questions like ...

- What conjecture(s) can we make based on the pattern(s) we notice?
- What mathematical evidence tells you that _____ is true?
- What can we learn from this mistake or misstep in our logic?
- Is there a more efficient method we could use for this?
- Can anyone else use different words to explain what *[team member]* said?
- How can we extend our thinking beyond what *[team member]* said?

MATHEMATICAL PRACTICES

MP 3 *Construct viable arguments and critique the reasoning of others.*
MP 8 *Look for and express regularity in repeated reasoning.*