

Practice Standard 3 Questions

Mathematical Practice 3: Construct viable arguments and critique the reasoning of others.

- Understand and use stated assumptions, definitions, and previously established results in constructing arguments.
- Make conjectures and build a logical progression of statements to explore their truth
- Analyze situations
- Justify their conclusions, communicate them to others, and respond to the arguments of others
- Reason inductively about data, make plausible arguments
- Compare the effectiveness of two reasonable arguments, distinguish correct logic or reasoning from flawed reasoning
- Construct solutions using concrete objects, drawings, diagrams, actions, etc. that make sense and are correct
- Decide whether the solutions of others made sense and ask useful questions to clarify or improve the arguments

Effective questions often begin with interrogatives: *How, What, Why*.

Possible MP3 Questions:

- How would you prove that?
- How did you reach that conclusion?
- Why is that true?
- What is the same/different about both solutions?
- Do you agree or disagree with...? Why?
- How can you draw a picture of the math term and describe the math term?
- What might be a non-example?
- How is your strategy the same or different than...?
- Why do you believe that is always true? ...never true? ...sometimes true?
- How could you prove that for all cases?
- What might be a possible problem using the same strategy or solution?
- How might we clarify our thinking on this?
- What parts of ...'s explanation might need clarifying?
- What parts of ...'s strategy or solution confuses you?
- How might a picture or math tool help you prove your conjecture?
- What do you think about what ... said?
- How would you explain ...'s strategy to someone else?
- How can you convince the rest of us that your answer makes sense?