

# Math 200 Mini-Project 1

Due Tuesday, February 9

In general, the mini-projects for this class will center around reading and writing mathematics. While for the other two projects, you will have much more free reign to choose your own topic (with guidance – don't panic!), for the first of the three mini-projects on reading and writing mathematics we will all start with the same one:

*Triangular Numbers, Gaussian Integers, and KenKen*, by John J. Watkins.

It is currently posted on BlackBoard.

Since we'll all be reading the same article, the directions for this mini-project will be pretty explicit. When you're choosing your own articles, I obviously won't be able to reference specific points to talk about, so it will be somewhat more open-ended as to what you cover in your response. Below are your directions for this one.

You should turn in what is probably best described as a college-mathematics-level book report on the article. I don't care too much about length, but can't imagine doing it in less than 2 full pages, especially for this one where you'll likely have to leave room in your write-up to draw full or partial KenKen diagrams. If you're past 5, you've gone too far. Your response should be typed in complete, grammatical sentences.

Here are the things I would like you to include in your narrative. Your responses should as much as possible be built into the narrative of your response, not responded to in a bulleted list.

- Summarize the main point of the article. What is the point of the article? What is the author trying to convey? Who was the author's intended audience?
- Find something in the article that was new to you – a KenKen trick that seems clever, a new piece of mathematics, etc. Give an example of how that trick could be used, or a computation done with that new piece of mathematics.
- Find something in the article that you don't understand, and write down a clear and concrete question that would help you resolve it. As in the previous example, this could be a conclusion that you don't understand how the author reached, or a piece of mathematics that you hadn't seen before.
- Try to do at least one thing that the author doesn't. This could be making your own Gaussian KenKen, or making a mathematical observation not in the article, etc.
- Brainstorm an idea or two that takes a point that the author makes and takes it even further.

To re-emphasize some of the points I've already mentioned above, be sure to write in complete sentences, and answer the above questions in a way slightly more introspectively than just "I didn't understand X." What didn't you get and why? Note that this is not at all judgemental – every math paper I have ever read has had parts I did not understand, especially on a first reading. Some times the article is written at a level of audience that you're not in, sometimes you've forgotten math or math jargon that makes the reading incomprehensible, or sometimes there's just an argument that you need help getting through even though you know all the requisite background. It's all okay!