Name: \_\_\_\_

Read Section 2.2 and answer the following questions in complete sentences. You may quote from Shahriari, but if you do, you should use quotation marks, and you should still explain what you think he means in your own words, as best you can.

This worksheet is due at the beginning of class Wednesday Jan 25. Please staple it to your homework.

1. Modern mathematical writing consists of English sentences interspersed with mathematical expressions. According to Shahriarhi, what is the *aim* of writing like this?

2. A well-written argument or proof has an introductory paragraph. According to Shahriarhi, what should an introductory paragraph do?

3. Now look at the introductory paragraph of Shahriari's proof of the irrationality of  $\sqrt{2}$ , and explain how each sentence corresponds to one of the things he said an introductory paragraph should do.

4. A well-written argument or proof also has a concluding paragraph. According to Shahriarhi, what should a concluding paragraph do?

5. Now look at the concluding paragraph of Shahriari's proof of the irrationality of  $\sqrt{2}$ , and explain how each sentence corresponds to one of the things he said an concluding paragraph should do.

6. Between the introductory and concluding paragraphs are the heart of the argument. Shahriari points out the importance of using "appropriate connecting phrases to make transitions clear." Look at the heart of Shahriari's proof of the irrationality of  $\sqrt{2}$ , and write down some of the "appropriate connecting phrases" that he uses.

7. According to Shahriari what are two reasons for writing mathematical arguments in paragraphs?