Quiz on “Writing a Math Phase Two Paper”

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(1) What is the aim of mathematical writing?
   Answer: The aim is to inform efficiently.

(2) What sections are normal in a ten-page math paper? Roughly how long are they?

(3) What sections are rare in a short math paper? Is their content simply out of place?

(4) How does a well-written abstract increase readership?

(5) What are the characteristics of a strong introduction?

(6) Give three reasons for dividing the body into sections? Is subsectioning ok?

(7) What are the characteristics of a strong paper title and of a strong section title?

(8) Does strong writing require using synonyms or varying syntax? Explain.

(9) What produces clear writing? Explain.

(10) How can the relative pronouns “it,” “this,” and “which” be confusing?

(11) When is it appropriate to use the personal pronouns ”I”, ”we”, and ”one” in a math paper?

(12) Are the pronouns “that” and “which” interchangeable? Explain.
(13) What are four common uses of the comma?

(14) What is wrong with the next sentence? Use colons to introduce: lists, explanations, and displays.

(15) When should numbers be written out? When is it acceptable to begin a sentence with a numeral or a symbol?

(16) Is it desirable to avoid the passive voice?

(17) If you have to choose between fluidity and clarity, which one must you choose?

(18) How can you make formulas easier to read?

(19) When should a formula be displayed?

(20) How should a displayed formula be punctuated?

**Improve the following sentences, explaining what is wrong with each one.**

(21) Consider $S_q$, $q = 1, \ldots, n$.

(22) Let $S$ be the set of all numbers of absolute value $< 1$.

(23) $ax^2 + bx + c = 0$ has real roots if $b^2 - 4ac \geq 0$.

(24) If $\Delta = b^2 - 4ac \geq 0$, then the roots are real.

(25) If $\Delta \geq 0$, $ax^2 + bx + c = 0$ has real roots.

(26) If the discriminant, $\Delta$, is nonnegative, then the roots are real.