Math 300, Spring 2009, J. Baldwin

Some writing and mathematic exercises

Vocabulary:

Use 'number' for counting discrete sets (number of blocks, not amount of blocks). Use amount for divisible quantities (the amount of sand).

Be sure to distinguish among blocks, dimensions of blocks, and sum s of numbers. Don't confuse the height of a block with the height of a tower of blocks.

Basic grammar: Look for the referent of each pronoun.

Beware of run-on sentences.

READ Strunk and White:

http://www.bartleby.com/141/

Examples:

In teams of two, find as many mistakes as you can in these deliberately garbled paragraphs that might appear in the essay.

I. "We need to express the Deluxe Set in a more mathematical way. The Deluxe set can be represented as a harmonic series: $1, 1/2, 1/3, 1/4 \ldots$. Rearranging the series as

$$1 + 1/2 + (1/3 + 1/4) + (1/5 + 1/6 + 1/7 + 1/8) + \ldots$$

you will notice that each parenthesized group will equal more or less to $1/2$."

How do we turn this is into a correct argument that a tower, made by stacking the Deluxe Set reaches as high was we want?

II. "The sum

$$1 + r + r^2 + \ldots r^n$$

is called a geometric sum. It equals $\frac{1}{1-r}$. Suppose we continue summing terms infinitely, we call this infinite sum

$$1 + r + r^2 + \ldots$$

a geometric series. For the starter set $r = 1/2$. When the limit is taken to infinity, it approaches 2 because $\infty - \frac{1}{2^{0-1}} = 2$."

How do we show the Deluxe set can be stacked in a $2 \times 1 \times 1$ box?