

Mathematics 1350H – Linear algebra I: matrix algebra

TRENT UNIVERSITY, Fall 2008

Assignment #6

Due on Friday, 5 December, 2008.

Math Limericks

A *limerick* is a poem with five lines, with lines one, two, and five having nine syllables and lines three and four having six syllables, and an *aabba* rhyming scheme. They are often humorous and often fracture the rules of grammar, pronunciation, and/or spelling. Here is an example of a limerick about Sylvester's Theorem (*i.e.* the Rank-Nullity Law):

A mathematician, Sylvester,
Had a wife he would often pester,
“As I raised the rank
All my null spaces shrank.”
“Add them,” she said, so he kissed her.

1. Write an original limerick (or as many limericks as you need :-) stating a theorem of linear algebra. [5]

A particularly specialized (and pretty difficult) type of limerick is the *equation limerick* in which the limerick expresses a (correct!) equation. Here is a relatively simple example:

$$(12 + 144 + 20 + 3 \cdot \sqrt{4}) / 7 + 5 \cdot 11 = 9^2$$

a dozen, a gross, plus a score
plus three times the square root of four
divided by seven
plus five times eleven
is nine squared (and not a bit more)

(Posted to `sci.math` by Rajeev Krishnamoorthy on 1992.05.23.)

2. Write an original limerick (or as many limericks as you need :-) expressing a correct equation. For maximum credit, it should be somehow related to linear algebra. [5]

Note: I'd like to post the best of the limericks to the course web site, including future iterations of the course. If you are willing to have your limericks appear there, please say so on your assignment.