Mathematics-Science 380 – History of Mathematics

TRENT UNIVERSITY 2004-2005

Assignment #6

Due on Monday, 10 January, 2005.

1. Indian mathematicians had the interesting custom of writing their mathematics in poetry. (A translation of one of Bhaskara's verse problems is given on page 113 of the text.) Write a poem expressing the Pythagorean Theorem and a proof of it. For maximum credit, write a poem with rhyme and metre, or write good poetry — bad free verse is just to easy to generate! [20]

Let us now praise prime numbers With our fathers that begat us: The power, the peculiar glory of prime numbers Is that nothing begat them, No ancestors, no factors, Adams among the multiplied generations. Non can foretell their coming. Among the ordinal numbers They do not reserve their seats, arrive unexpected. Along the line of cardinals They rise like surprising pontiffs, Each absolute, inscrutable, self-elected. In the beginning where chaos Ends and zero resolves, They crowd the foreground prodigal as forest, But the middle distance thins them, Far distance to infinity Yields them as rarely returning comets. O prime improbable numbers, Long may formula-hunters Steam in abstraction, waste to skeleton patience: Stay non-conformist, nuisance, Phenomena irreducible To system, sequence, pattern or explanation.

Helen Spalding

Numbers

A number will find fulfillment enough in knowing its mind and doing its stuff.

Piet Hein