

WE'RE TALKIN' ALGEBRA

words and music by Tom Lehrer
commissioned by Academic Systems in Mountain View, CA

[Note: The verses are to be recited to a quasi-rap beat.]

Part I: Polynomials, rational functions, and theory of equations

Polynomials and rational functions, coefficients,
Linear factors and quadratics and pure imaginaries,
Partial fraction decomposition,
And synthetic division, multiplicity of roots,
And complex conjugates.

(What?)

I said "complex conjugates"!

(WHAT???)

REFRAIN (sung): We're talkin' algebra,
What we're doin' here is algebra.
Try a little bit and Wow!
You are gonna wonder how
Did you ever get along without it up to now.
It's algebra,
Get yourself a little algebra.
You are really gonna be amazed at all that it can do for you.

(Who, me?)

Yes, you!

Part II: Conic sections

Hyperbolas and circles and ellipses and parabolas
And diameters and radii and axes of symmetry
And sections of the cone and completion of the square
And directrices and intercepts and vertices and foci
And asymptotes.

(What?)

I said "asymptotes"!

(WHAT???)

REFRAIN (sung)

Part III: Matrices and determinants

Linear simultaneous equations and solutions,
Using coefficient matrices and quotients of determinants,
And inconsistent systems, elementary operations,
Using Cramer's rule and Gaussian elimination,
And cofactors.

(What?)

I said "cofactors"!

(WHAT???)

REFRAIN (sung)

Part IV: Mathematical induction, sequences, and counting

Geometric sequences and infinite series,
Permutations, combinations, and the sigma notation,
Mathematical induction, arithmetical progression,
And binomial expansion and the Pascal triangle,
And factorials.

(Huh?)

I said "factorials"!

(HUH???)

REFRAIN (sung)

[On the recording the lines "Who, me?", "What?", and "Huh?" were spoken by Edward Landesman.]