

# WE'RE TALKIN' ALGEBRA

words and music by Tom Lehrer

[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)

### REFRAIN

Chords: G7, C, G, D7, G, G7, C, G, D7, G, D7, G

Lyrics:  
We're talk - in' al - ge bra, What we're do - in' here is al - ge - bra.  
Try a lit - tle bit and Wow! You are gon - na won - der how Did you ev - er get a -  
long with - out it up to now. It's al - ge - bra,  
Get your - self a lit - tle al - ge - bra. You are real - ly gon - na  
be a - mazed at all that it can do for you! (Who, me?) Yes, you!