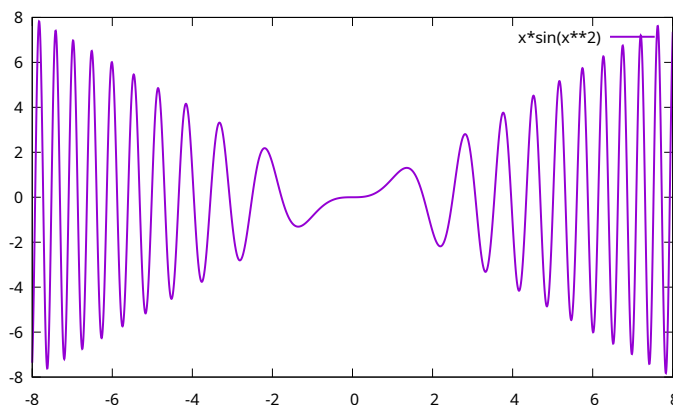# *Visualizing Algebra* working group

Improve your mental model of functions in a fun, no-anxiety environment!

FOR STUDENTS IN THE ALGEBRA/GEOMETRY/ALGEBRA-2 SEQUENCE:

- Review of previous math - the *whys* of the rules.
- Visual exploration of the pantheon of functions: *structure* and *shape*.
- Symbolic algebra with `sympy` for equations and factoring polynomials.
- *No prerequisites:* we do not assume knowledge of calculus; we introduce all the algebra ideas we use.

Shape and structure of $f(x) = \sin(1/x^2)$.

LOGISTICS:

date: *Mondays* (starting October 6, 2025)

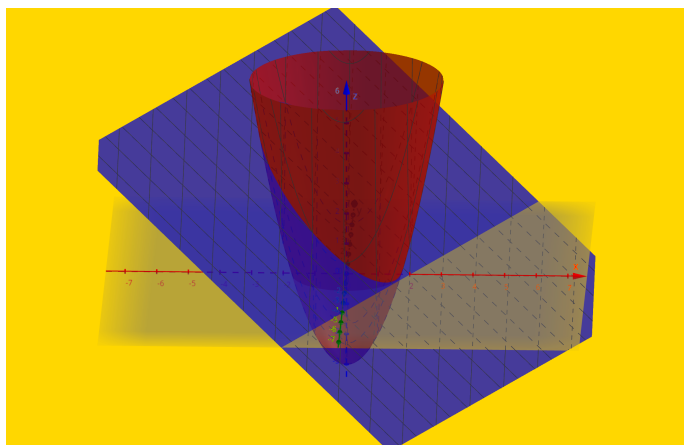**time:** 7pm US/Mountain
(6pm US/Pacific, 8pm US/Central,
9pm US/Eastern)

location: `https://meet.jit.si/math-working-group`

catch-up sessions: *Wednesdays* 7pm US/Mountain
Sundays 10am US/Mountain

instructor: Dr. Mark Galassi

Scan this qr code or click here for more details.

To the left: an example of what we aim to visualize at the end of the working group:

The (blue) plane:

$$g(x) = -x + 1/2y + 2$$

slices the (red) curved surface:

$$f(x, y) = x^2 + y^2 - 3$$

generating a 1-dimensional intersection curve.

Questions and sign-up: Mark Galassi <mark@galassi.org>   +1-505-629-0759 (voice only)