# Domain

**NO** ← I have a Radical or Rational function → **YES**

Sweet...Domain is the set of all real numbers (not including logs here)

Well, is it a Rational or a Radical?

Still not sure what a Rational or a Radical looks like?

Seek out the nearest Math professional

Radical function (with an even root)

Rational function

Domain is the set of all real numbers where the denominator does not equal ZERO!

What is under the radical (the radicand)?

index → $\sqrt[n]{k}$ ← radicand

Linear or absolute value radicand?

Polynomial radicand with degree ≥ 2?
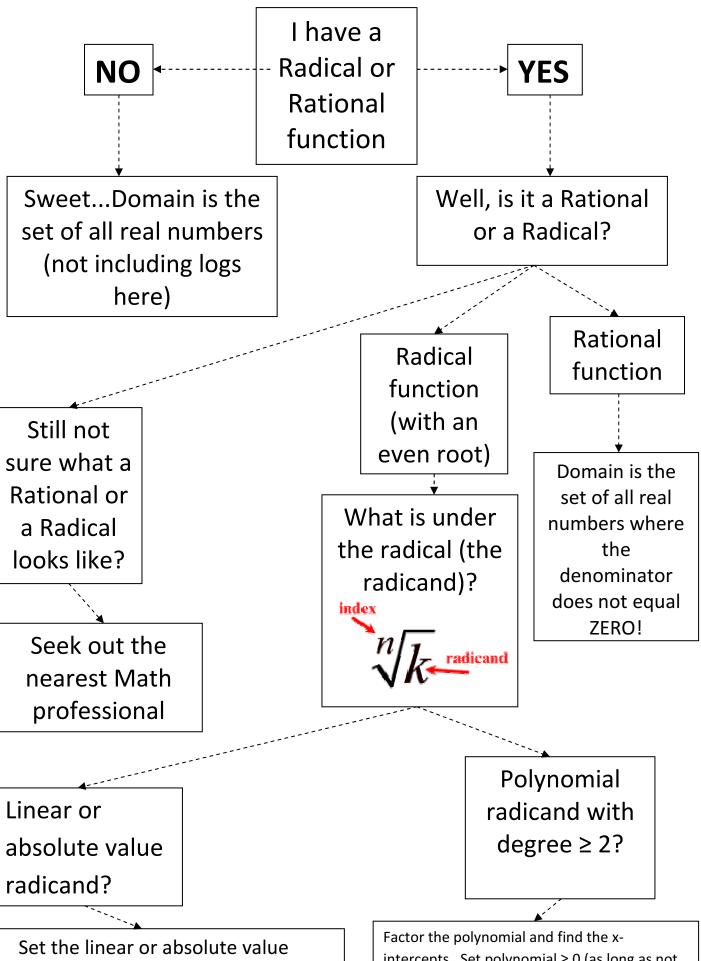
Set the linear or absolute value expression ≥ 0 (as long as not in the denominator of a rational (that would be too fun)
Domain is the set of all x values that satisfy the inequality

Factor the polynomial and find the x-intercepts. Set polynomial ≥ 0 (as long as not in denominator). Do not solve this inequality. Watch out for the "a" value and pay attention to the type of x-ints that are produced. Sketch a graph of the radicand (only the polynomial). Find the intervals that produce positive outputs (graph above x-axis) and use proper notation to write domain.