



ROOTS OF ONE

Why

1

Definition

The equation

$$x^p = 1$$

has p roots and these are called the p roots of 1.² We call the complex numbers which solve this equation the *p th roots of one* or the *(p th) roots of unity*.

A n th root of unity $r \in \mathbf{R}$ is *primitive* if it is not an m th root of unity for any $m < n$.

¹Future editions will include.

²Future editions will expand.

