

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 pth roots of one or the (pth) 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.

