

# Math Notes

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Canine-Table

Github

POSIX Nexus serves as a comprehensive cross-language reference hub that explores the implementation and behavior of POSIX-compliant functionality across a diverse set of programming environments. Built atop the foundational IEEE Portable Operating System Interface (POSIX) standards, this project emphasizes compatibility, portability, and interoperability between operating systems.

## Abstract

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# I Algebra

## I Linear Algebra

### I Distance Formula

$$\begin{aligned} P_1(-3, 4) & \quad P_2(9, -1) \\ x_1 = -3 & \quad x_2 = 9 \\ y_1 = 4 & \quad y_2 = -1 \\ d = \sqrt{(9 - (-3))^2 + ((-1) - 4)^2} & \Rightarrow \sqrt{3^2 + 4^2} \Rightarrow \sqrt{9 + 16} \Rightarrow \sqrt{25} \Rightarrow 5 \end{aligned}$$