

MATH 538 - Root System

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1 Root System

Definition 1.1 (Euclidean Space). A vector space E is an **Euclidean space** if it is finite dimensional over \mathbb{R} , with an inner product (bilinear, and $(v, v) \geq 0$ for all v) $(-, -)$.

Definition 1.2 (Root System). A **root system** $\Phi \subseteq E$ is a finite set in E s.t.

- 1.