**Sets**

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Unordered collection of members

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   1. **Enumeration (Roster Method)**

A set with all its members within curly braces ‘{‘delimited by a comma ‘,’

{ m1, m9, m3, …, mj }

* 1. **General Prosaic Format**

A set represented by a general statement, like

{ A set of polygons }

* 1. **Set-builder notation**

{ x | Φ(n) } or

{ x : Φ(n) }

Has three parts:

* A variable,
* A colon or vertical bar, called ‘such that’ or ‘for which’ or ‘with the property that’
* A logical predicate (generally, a boolean valued function)

A set builder notation may not define a set, like {x : x ∉ x }, Russell’s paradox

Set notation as per **Set existence axiom,** contains a domain

{ x | x∈ E and Φ(n) } or { x | x∈ E ∧ Φ(n) }

* 1. **Extended set-builder notation**