Info

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is written (completely with human hands) by Rupadarshi Ray,
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interior, exterior, boundary points in a metric space

Definition. Interior point

Let $S \subseteq M$ and $x \in S$. Then x is an interior point of S if

$$\exists r > 0;\ r\text{–}B_M(x) \subseteq S.$$

Definition. Interior of S

$$\operatorname{int}(S) := \text{interior points of } S$$

Definition. Boundary point

Let $S \subseteq M$ and $x \in S$. Then x is a boundary point of S if $\forall r > 0$

$$r\text{–}B_M(a) \cap S \neq \emptyset$$

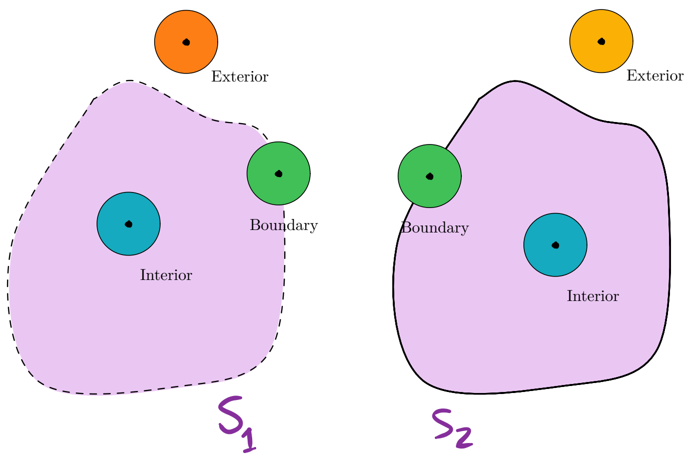
and

$$r\text{–}B_M(a) \cup M \setminus S \neq \emptyset$$

Definition. Exterior points

Let $S \subseteq M$ and $x \in S$. Then x is an exterior point of S if

$$\exists r > 0;\ r\text{–}B_M(x) \subseteq M \setminus S.$$



$$\operatorname{int}(S) \subseteq S$$

Definition. Exterior of S

$$\operatorname{ext}(S) := \text{ exterior points of S}$$

$$\operatorname{ext}(S) = \operatorname{int}(M \setminus S)$$

$$\operatorname{int}(S),\ \operatorname{ext}(S),\ \partial S \text{ partition } M$$

Current note has 0 direct children and 0 total descendants.

And it has 9 siblings.