Defn $\partial E \equiv \overline{E} \cap \overline{(E^c)}$

∂E is called the boundary of the set E.

Can $\partial E \supsetneq E$?

Fact: $\overline{E} = E \cup (\partial E)$

Spse $E \subseteq F \subseteq M$ (M,d)

Defn E is dense in F iff $\overline{E} \supseteq F$

Thm E is dense in F iff every pt of F is in E or is a limit pt of E

iff $\forall x \in F \; \exists x_n \in E$ s.t. $x_n \to x$