types of limit points

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Defines	ω-accumulation points
Defines	condensation points
Defines	cluster points

Let X be a topological space and $A \subset X$ be a subset.

A point $x \in X$ is an ω-*accumulation point of* A if every open set in X that contains x also contains infinitely many points of A.

A point $x \in X$ is a *condensation point of* A if every open set in X that contains x also contains uncountably many points of A.

If X is in addition a metric space, then a *cluster point* of a sequence $\{x_n\}$ is a point $x \in X$ such that every $\epsilon > 0$, there are infinitely many point x_n such that $d(x, x_n) < \epsilon$.

These are all clearly examples of limit points.