20. Give counterexamples to the following false statements.

(a) The isolated points of a set form a closed set.
(b) Every open set contains at least two points.
(c) If $S_1$ and $S_2$ are arbitrary sets, then $\partial(S_1 \cup S_2) = \partial S_1 \cup \partial S_2$.
(d) If $S_1$ and $S_2$ are arbitrary sets, then $\partial(S_1 \cap S_2) = \partial S_1 \cap \partial S_2$.
(e) The supremum of a bounded nonempty set is the greatest of its limit points.
(f) If $S$ is any set, then $\partial(\partial S) = \partial S$.
(g) If $S$ is any set, then $\overline{S} = \partial S$.
(h) If $S_1$ and $S_2$ are arbitrary sets, then $(S_1 \cup S_2)^0 = S_1^0 \cup S_2^0$.

(a) $\{x \mid x = 1/n, \ n = 1, 2, \ldots\}$; (b) $\emptyset$; (c). (d) $S_1$ = rationals, $S_2$ = irrationals (e) any set whose supremum is an isolated point of the set (f). (g) the rationals (h) $S_1$ = rationals, $S_2$ = irrationals