Ex 2.14 Suppose $x \notin \bar{A}$.

Then $x \in \bar{A}^c$, $\bar{A}^c$ open $\Rightarrow \exists\, x_i$ s.t. $x_i \in \bar{A}^c$
$\Rightarrow x_i \notin A$ ⨳

Ex 2.16 A closed then.

$f^{-1}(A)$

$f^{-1}(A^c)$ is open.

Talk to Tam about skipping the exercises at the end of the chapters.

$x \in f^{-1}(A) \Rightarrow f(x) \in A \Rightarrow x \notin f^{-1}(A^c)$

and $x \in f^{-1}(A^c) \Rightarrow x \notin f^{-1}(A)$

$\Rightarrow f^{-1}(A^c)^c = f^{-1}(A)^c$ so $f^{-1}(A)$ is closed

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Ex 2.23 ~~duh~~

Ex 2.28 No inverse!

Ex 2.29 ~~$f: X \to Y$ bijective. f homeo, f open~~

Ex 2.31 a) See Ex 2.22. c) Use Prop 2.19.

2.33 for $x \in X$ only neighborhood of x is X so contains all points

so $(x_i) \in X$ converges to x.