Definition MunkTop.16.1: If $(X, \mathscr{T})$ is a topological space and $Y \subseteq X$ then *the subspace topology on Y inherited from* $(X, \mathscr{T})$ is $\{Y \cap U : U \in \mathscr{T}\}$.

Definition MunkTop.16.2: If $(X, \mathscr{T})$ is a topological space and $Y \subseteq X$ then $(Y, \mathscr{T}')$ is a *subspace* of $(X, \mathscr{T})$ if and only if $\mathscr{T}'$ equals the subspace topology on Y inherited from $(X, \mathscr{T})$.

Definition MunkTop.16.3: If then *the dictionary order on* $(R, A) \times (S, B)$ is the unique T such that for every y, $y \in T$ if and only if there exist p, q, r, s such that $y = ((p,q),(r,s))$ and $p,r \in A$ and $q,s \in B$ and pRr or $p = r$ and qSs.

Definition MunkTop.16.4: If $I = [0, 1]$ and R equals the dictionary order on $(\{(x, y) : x < y\}, I) \times (\{(x, y) : x < y\}, I)$ then *the ordered square* I_0^2 is $(I \times I$,the order topology on $(I \times I, R))$.

Definition MunkTop.16.5: If R is a strict sipmle order on X and $Y \subseteq X$ then Y is a *convex* subset of (X, R) if and only if for every a, $b \in Y$, $(a, b) \subseteq Y$.