Definition 8.74. *[OKK]* *Given a topological space (X, τ), a **base** [a] is a collection $\mathcal{B}$ of open sets (*i.e. $\mathcal{B} \subseteq \tau$) with the property that every element of τ is an union of elements of $\mathcal{B}$.*

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[a] Also known as *basis*. See [12] page 46, or Chapter 5 Section 6 Definition 5.6.4 in the notes [3], or [40] for an introduction.