

## 0.1 Measure space

In a metric space, the structure was defining a value for each two elements of the set.

In a measure space, the structure defines a value of subsets of the set.

A measure space includes the set  $X$ , subsets of the set,  $\Sigma$ , and a function  $\mu$  which maps from  $\Sigma$  to  $\mathbb{R}$ .

### 0.1.1 Sigma algebra

Requirement for  $\Sigma$ .