

Definition 10.i.2. [OTK] Given (M_1, d_1) and (M_2, d_2) metric spaces, a map $\varphi : M_1 \rightarrow M_2$ is called an **isometry** if

$$\forall x, y \in M_1, \quad d_1(x, y) = d_2(\varphi(x), \varphi(y)) . \quad (10.i.3)$$