A tolerance data type is based on a tolerance relation L:
for any a, b ∈ A,

1. **L(a,a)=1, and**
2. **L(a,b) ⇔ L(b,a).**

A tolerance relation L is weaker than an equivalence relation E. Intervals satisfy the tolerance relation but not the equivalence relation.
Example. Let L(a,b) ⇔ |a-b|<1. If a=0, b=0.5 and c =1.5 then L(a,b)=1, but L(a,c)=0 (false), because |a-c|=1.5.