## Reflection

We all have experienced a reflection, look in the mirror. Pretty simple, right? We will formalize that definition this way.

A reflection in some line *j* maps every point P into a point P', such that:

- 1. If P does not lie on *j*, then *j* is the perpendicular bisector of  $\overline{PP'}$
- 2. If P lies on *j*, then P' is the same point as P.





By definition, line *k* is the **perpendicular bisector** of AA', BB' and CC'.

That means when we draw our lines they must be perpendicular.

And the distance from point A to line k = the distance from point A' to line k.