Every point of $X$ needs to lie on one black circle (centered at $p$) and one green circle (centered at $p_2$).
Figure 2  A distance quadruple from two points of view.

In \( \mathbb{R}^2 \):

\[ p_1 \quad q_1 \quad p_2 \quad q_2 \]

In \( G \), the group of rigid motions:

\[ g(p_1) = p_2 \quad \text{and} \quad g(q_1) = q_2 \]
A polynomial partitioning.

In the picture, $D=4$, so each line enters at most five cells.
Figure 4

It's hard for me to draw, but $Z(P)$ is really a 2-dimensional surface in $\mathbb{R}^3$.

In this part of the picture, the red parallelogram is a piece of $Z(P)$. The solid lines lie in $Z(P)$, and the dotted line passes through $Z(P)$. 