## Generalization of Problem 3



Suppose that we are given two intersecting lines in the plane, say $\mathbf{L}$ (the black line) and $\mathbf{M}$ (the red and blue line), and they meet at a point $\mathbf{P}$. Then $\mathbf{M}-\{\mathbf{P}\}$ consists of two open rays (the red and blue ray). Each of them is the intersection of $\mathbf{L}$ with one of the open half-planes (sides) determined by $L$. These half-planes are shaded in lighter tones of red and blue.

