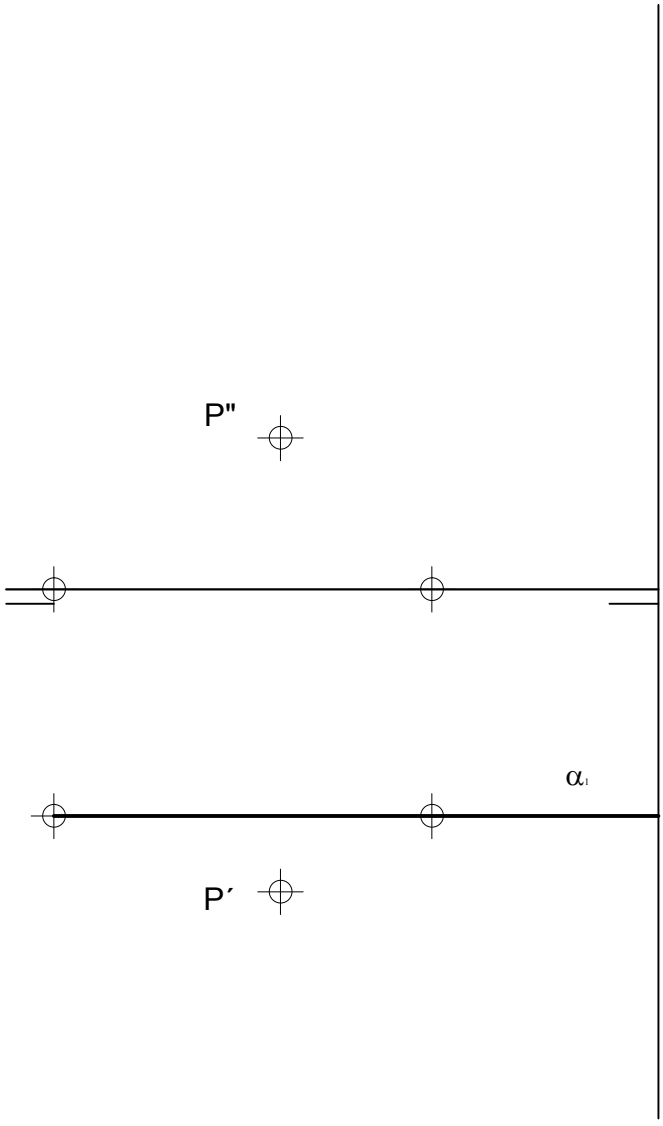
*EXERCISE 1*

*Find the equation of the line that containing the point* $P(5,3,2)$ *is perpendicular to the plane that passes through the points* $(7,0,0)$ *and* $(4,3,0)$ *and is perpendicular to the plane* $XOY$*. Obtain the intersection.*

Draw from the point P a line p that is perpendicular to α. Find also the intersection between the line and the plane (I).



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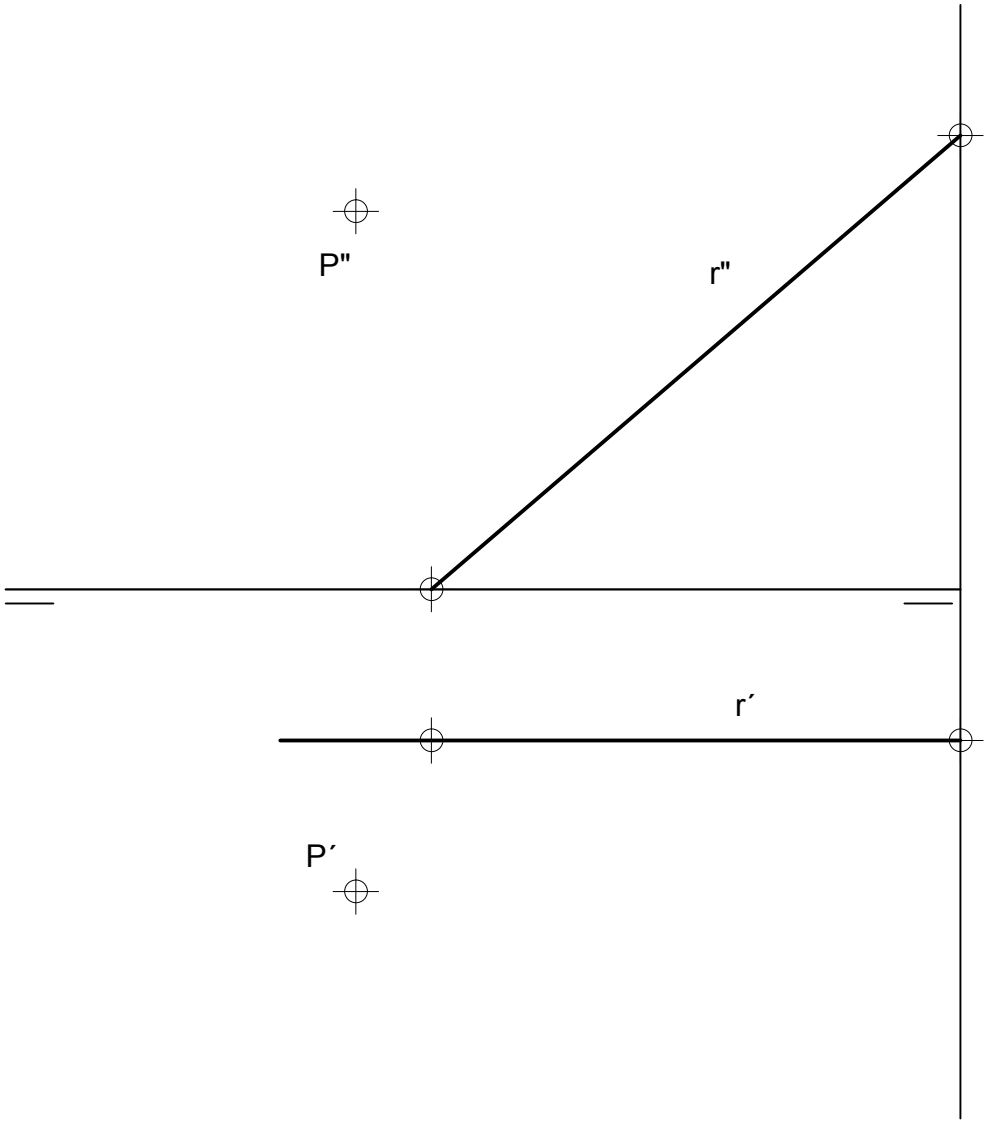
*EXERCISE 2*

*Find the plane that containing the point* $P(8,5,4)$ *is perpendicular to the line that passes through the points* $(7,2,0)$ *and* $(0,2,6)$*. Obtain the intersection.*

Draw from the point P a plane α that is perpendicular to r. Find also the intersection point between the line and the plane (I).



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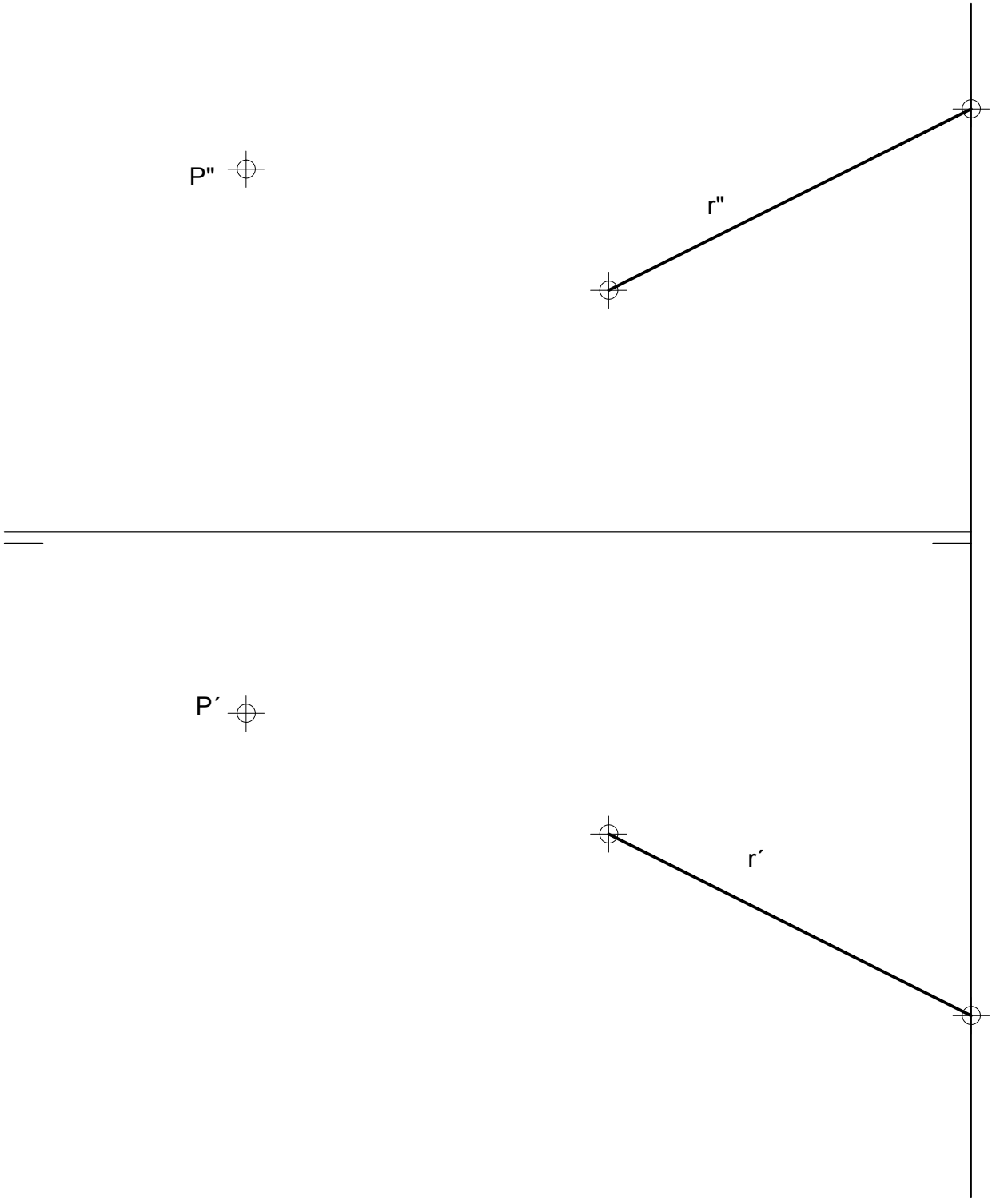
*EXERCISE 3*

*Calculate the line that passing through the point $P(12,3,6)$ is perpendicular and intersects the line $r$: $\frac{x-6}{-6} = \frac{y-5}{3} = \frac{z-4}{3}$. Obtain the intersection.*

Draw from the point P a line that intersects the line r and is perpendicular to it.

Find also the intersection between the two lines.



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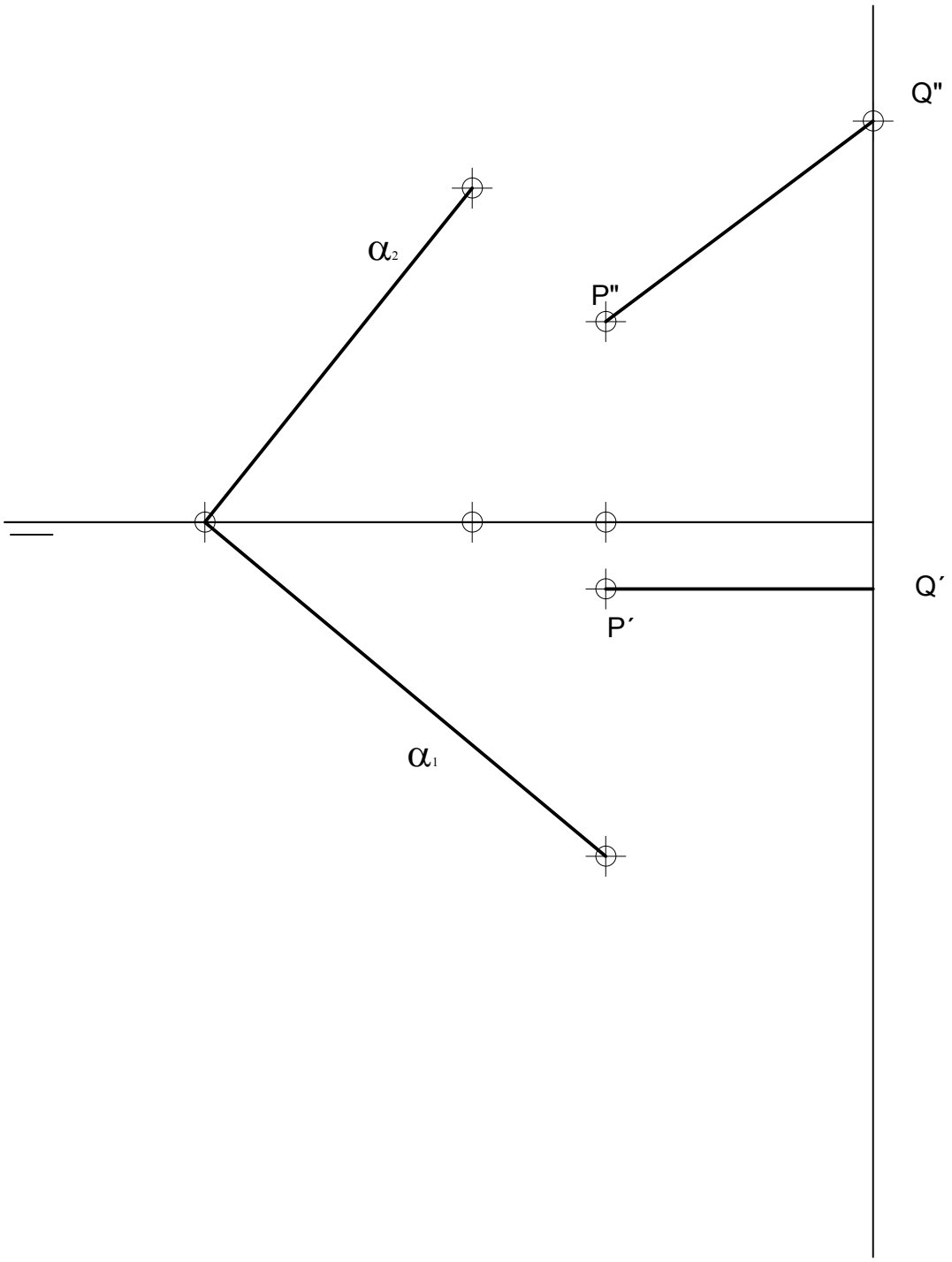
*EXERCISE 4*

*Let r be the line determined by the points* $(4,1,3)$ *and* $Q(0,1,6)$*, and* $\alpha$ *the plane determined by the points* $(10,0,0)$*,* $(6,0,5)$ *and* $(4,5,0)$*. Find the planes that containing the line r are perpendicular to the plane* $\alpha$*.*

Draw from the points P and Q perpendicular planes to the plane α.



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