



Figure 26.14: Case (1)

- (2) When $\alpha_1, \lambda_1 < 0$ and $\alpha_2, \lambda_2 > 0$, the points p_4 and q_4 belongs to quadrant II (with respect to the affine frames $(p_3, (p_1 - p_3, p_2 - p_3))$ and $(q_3, (q_1 - q_3, q_2 - q_3))$). Two possibilities occur. Either p_4 belong to the open half space containing p_3 and bounded by the line $\langle p_1, p_2 \rangle$ and q_4 belong to the open half space containing q_3 and bounded by the line $\langle q_1, q_2 \rangle$, or p_4 belong to the open half space not containing p_3 and bounded by the line $\langle p_1, p_2 \rangle$ and q_4 belong to the open half space not containing q_3 and bounded by the line $\langle q_1, q_2 \rangle$. The first possibility is illustrated by the top of Figure 26.15, while the second is illustrated by the bottom of Figure 26.15.
- (3) When $\alpha_1, \lambda_1 > 0$ and $\alpha_2, \lambda_2 < 0$, the points p_4 and q_4 belongs to quadrant IV (with respect to the affine frames $(p_3, (p_1 - p_3, p_2 - p_3))$ and $(q_3, (q_1 - q_3, q_2 - q_3))$). Two possibilities occur exactly as in Case (2) depending on the position of p_4 with respect to the line $\langle p_1, p_2 \rangle$ and on the position of q_4 with respect to the line $\langle q_1, q_2 \rangle$. The first possibility is illustrated by the top of Figure 26.16, while the second is illustrated by the bottom of Figure 26.16.
- (4) When $\alpha_1, \lambda_1, \alpha_2, \lambda > 0$ and $\alpha_2, \lambda_2 < 0$, the points p_4 and q_4 belongs to quadrant I