One way to make level-of-detail (LOD) transitions is to use an $\alpha$ fade, where you lerp the $\alpha$ channel to blend the two LODs. For example, assume that you have a triangle $\triangle(p_1, p_2, p_3)$ and a vertex $q$ that splits the triangle into two triangles $\triangle(p_1, p_2, q)$ and $\triangle(p_1, q, p_3)$ as follows:

At the coarse LOD, we just render $\triangle(p_1, p_2, p_3)$, and at the fine LOD, we render both $\triangle(p_1, p_2, q)$ and $\triangle(p_1, q, p_3)$, but in between we render all three triangles and use alpha blending to smooth the transition.

Assuming that $0 \leq t \leq 1$, give the blending equation that describes how to combine the two images as a function of $t$. It should be the case that when $t = 0$, just the coarse LOD is rendered and when $t = 1$, just the fine LOD is rendered.