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1003-30-439 Yi Ling* (lingyi1979_2001@yahoo.com), Department of Mathematics, Delaware State
University, Dover, DE 19901, and Fengshan Liu (fliu@desu.edu), Department of Mathematics,
Delaware State University, Dover, DE 19901. A Note on Kim's Conjecture.

Let \mathcal{A} be the class of the normalized analytic functions in the unit disk \mathbb{U} , and $\mathcal{S}, S^*(\alpha)$ and $\mathcal{K}(\alpha)$ denote the subclasses of \mathcal{A} consisting of the univalent functions, the starlike functions of order α and convex functions of order α in \mathbb{U} , respectively. Y. C. Kim gave the following conjecture: Let $0 \leq \alpha < 1, \beta > 1$. If f is a member of \mathcal{S} , or $\mathcal{S}^*(\alpha)$, or $\mathcal{K}(\alpha)$, then the function $\phi(3, 3 + \beta; z) * f(z)$ belongs to the same class, where $\phi(a, c; z)$ is the incomplete beta function. In this paper, we prove that the Kim's conjecture is true for $f \in \mathcal{S}^*(\alpha)$ or $f \in \mathcal{K}(\alpha)$ and improve some other results. (Received September 21, 2004)