1056-30-175 **Rosihan M. Ali*** (rosihan@cs.usm.my), School of Mathematical Sciences, Universiti Sains Malaysia, 11800 Penang, Malaysia. *On Janowski starlike functions.*

Let $S^*[A,B]$ be the class consisting of normalized Janowski starlike functions, that is, analytic functions f satisfying the subordination

$$\frac{zf'(z)}{f(z)} \prec \frac{1+Az}{1+Bz},$$

where A, B are complex constants, $A \neq B, |B| \leq 1$ and z is in the unit disk Δ. A new class of analytic functions defined by means of convolution is introduced, and sufficient conditions are determined for functions in this class to be Janowski starlike. The results obtained extend earlier known works.

For $A, B, D, E \in [-1, 1]$ and p an analytic function on Δ with $p(0) = 1$, conditions on A, B, D, and E are determined so that $1+\beta zp'(z) \prec (1+Dz)/(1+Ez)$ would imply that $p(z) \prec (1+Az)/(1+Bz)$. Similar results are obtained involving the expressions $1 + \beta(zp'(z)/p(z))$ and $1 + \beta(zp'(z)/p^2(z))$. These results are next applied to obtain sufficient conditions for analytic functions to be Janowski starlike.

Finally for functions in the class $S^*[A,B]$, its radius of starlikeness, radius of strong-starlikeness, and radius of parabolic-starlikeness are computed. Consequences of these results will also be discussed. (Received August 11, 2009)