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John W Hoggard* (jhoggard@edinboro.edu), Math/CS Department, Doucette Hall 200, 215 Meadville St, Edinboro, PA 16444. *Accuracy of computer generated pictures of Julia sets for the family $\lambda \tan(z)$.*

A Julia set for a complex function f is the set of all points in the complex plane where the iterates of f do not form a normal family. We can use the fact that the Julia set for meromorphic functions with polynomial Schwarzian derivative is the closure of those points which go to infinity under iteration as a basis for an algorithm which can generate computer pictures of Julia sets for such functions, but will the pictures be an accurate portrayal of the Julia set? I consider the family $\lambda \tan(z)$ for real λ , and show using mapping properties that the pictures generated by the algorithm are accurate in the sense that every colored pixel will contain a point in the Julia set. (Received September 20, 2007)