1056-13-1581 **Marie A Vitulli*** (vitulli@uoregon.edu), Department of Mathematics, 1222 University of Oregon, Eugene, OR 97403-1222. *A New Elementwise Criterion for Weak Subintegrality.*

Weakly subintegral extensions of commutative rings first appeared in the context of schemes in the work of Andreotti and Bombieri in 1969. An extension $A \subset B$ is weakly normal provided that the induced map $\mathrm{Spec}(B) \to \mathrm{Spec}(A)$ is a set-theoretic bijection and all of the induced maps of residue fields $A_P/PA_P \to B_Q/QB_Q$ are purely inseparable, where $P = Q \cap A$. In the mid to late 1990s Reid, Roberts, and Singh introduced and developed a criterion for when a single element $b \in B$ is weakly subintegral over a subring A of B. An element b satisfies their condition if and only if $A \subset A[b]$ is a weakly integral extension. We provide a new elementwise criterion that is much more transparent than the original condition. We start with the case of an extension of fields and then deal with the case of a general ring extension. (Received September 22, 2009)