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John H. Jaroma* (john.jaroma@avemaria.edu), Department of Mathematics & Physics, Ave Maria University, Ave Maria, FL 34142. *On Prime Factors of $A^n \pm 1$* . Preliminary report.

A short time ago, Ishikawa, Ishida, and Yukimoto demonstrated: *The prime factors of $A^m - 1$ and $A^n - 1$ coincide if and only if $m = 1$, $n = 2$, and $A = 2^l - 1$; The prime factors of $A^m - 1$ are a subset of those of $A^n - 1$ if and only if $m \mid n$, or $m = 2$ and $A = 2^l - 1$.* We shall show that both parts of this theorem follow nicely using Zsigmondy's Theorem. Also to be presented is an analogous result for $A^n + 1$. (Received September 12, 2008)