1112-01-5 **Donald A. Sokol*** (vsokol@sbcglobal.net), 11S.047 Palisades Rd., Burr Ridge, IL 60527. *The Uncertainty Principle of the Pythagorean Theorem.*

It's not widely recognized that circa 1800 B.C., the Babylonian algorithm for the integer triple, $a^2 + b^2 = c^2$, was constructed as $a = 2(x + y)y$; $c = a + x^2$ and $b = \sqrt{c^2 - a^2}$ and later updated to $b = c - 2y^2$ (where $x = 1$, $y = 1$ then $a = 4$, $c = 5$ and $b = 3$). Euclid later, circa 300 B.C., modified this algorithm to $a = 2xy$, $c = x^2 + y^2$ and $b = x^2 - y^2$ with appropriate caveats. (Where $x = 2$, $y = 1$ then $a = 4$, $c = 5$, and $b = 3$). Still later, circa 2000 A.D., it was shown that $a = 2(x - y)y$, $c = -a + x^2$ and $b = c - 2y^2$. (Where $x = 3$, $y = 1$ then $a = 4$, $c = 5$ and $b = 3$). At least six other algorithms using various combinations of $+/-x$, and $+/-y$ in "a" are possible without redundancy. Other better known algorithms for integer triples in x and y include reciprocal pairs Ala Robson and Sierpinski's modified Euclidian based algorithm. The result is that one cannot easily determine which algorithm was used to produce a specific integer triple. (Received August 04, 2015)