Integer right triangles

Problem 39

If p is the perimeter of a right angle triangle with integral length sides, $\{a,b,c\}$, there are exactly three solutions for $p = 120$.

$\{20,48,52\}$, $\{24,45,51\}$, $\{30,40,50\}$

For which value of $p \leq 1000$, is the number of solutions maximised?