

Let $x = y + d ; z = y - d$
 $x^2 - y^2 - z^2 = (4d - y) \times y$
so $n = d_1 \times d_2$
with $d_2 = y ; 4d - y = d_1$
 $\Leftrightarrow d_2 = y ; d = \frac{(d_1 + d_2)}{4}$
The constraint $z > 0 \Leftrightarrow d < y \Leftrightarrow d_2 < 3d_1$

loop on d_1 *and* d_2
increment for d_2 *by* 4 *due to* $d_1 + d_2 \equiv 0 \text{ Mod}[4]$

$$\begin{aligned}
 n &= d_1 \times d_2 \\
 d_2 &= y ; d = \frac{(d_1 + d_2)}{4} \\
 d_2 &< 3d_1
 \end{aligned}$$