Problem december 2001

Bestäm alla positiva **heltal** $x_1, x_2, \ldots, x_8$ som löser systemet

$$\begin{cases} (x_1 + x_2 + \cdots + x_8)^2 &= x_1 x_2 \cdots x_8 \\ 2(x_1 + x_2 + \cdots + x_8) &= x_1^2 + x_2^2 + \cdots + x_8^2 \end{cases}.$$