Challenge 27: A Pretty Pattern

Here we go…

$1 \times 2 \times 3 \times 4 = 24 = 5^2 - 1$

$2 \times 3 \times 4 \times 5 = 120 = 11^2 - 1$

$3 \times 4 \times 5 \times 6 = 360 = 19^2 - 1$

Golly! Is every product of four consecutive integers one less than a perfect square??