Problem of the Week

Problem E

Sixty-Four!

The product $64 \times 63 \times 62 \times \cdots \times 3 \times 2 \times 1$ can be written as 64! and called "64 *factorial*".

In general, the product of the positive integers 1 to m is

$$m! = m \times (m-1) \times (m-2) \times \cdots \times 3 \times 2 \times 1$$

If 64! is divisible by 2025^n, determine the largest positive integer value of n.