2022 π Day digit puzzle

To celebrate π Day 2022, make 3141 using as few copies of 2 as possible with the following operations (in addition to parentheses):

- Standard operations: $+, -, \times, \div$

- Negation: $-\square$

- Exponentiation of two numbers: $\square^{\square}$

- Square root of a number: $\sqrt{\square}$

- Factorial: $\square!$ (Note: you may use iterated factorial but not muilti-factorial, so that $3!! = (3!)! = 6! = 720$, and **not** $3!! = 3 \times 1 = 3$.)

- Glueing of 2's: so 22 and 222 are allowed, which count for 2 and 3 digits respectively