C*. Three experiments are conducted:

Experiment 1: One card is randomly drawn from a well-shuffled poker deck consisting of 54 cards – including 2 jokers.

Experiment 2: A ball is randomly drawn from an urn that contains exactly 3 black balls, 3 green balls, 2 yellow balls, and 2 orange balls.

Experiment 3: Experiments 1 and 2 are combined.

What is the probability that Experiment 3 results in the event that both a joker is drawn and an orange ball is not drawn?

Please display the computation that led to your solution.

Sample computation:

$| \Omega_1 | = 54 \ \wedge \ p_1(\text{ a joker is drawn }) = 2/54 \approx 0.0370$

$| \Omega_2 | = 10 \ \wedge \ p_2(\text{ an orange ball is not drawn }) = 1 - 0.2 = 0.8$

$| \Omega_3 | = 540 \ \wedge \ p_3(\text{ an orange ball is not drawn and a joker is drawn }) \approx 0.0370 \times 0.8 = 0.0296$

The solution is approximately equal to 0.02960
