

# EoS - E-tutorial 03 - WiSe 2022/2023

StatRef.E.1.3.00045 (60 Punkte)

Sie haben die folgende Antwort gegeben:

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There are three urns in front of you. Each urn is filled with black and yellow balls. The first urn contains 7 black and 1 yellow balls. The second urn is filled with 5 black and 10 yellow balls. The third one contains 3 black and 9 yellow balls. In the following, you draw exactly one ball from each urn.

**Hint:** Please round your results - if necessary and if not asked otherwise - to **four** decimal places.

a) (10 Points) Please calculate the probability that every draw yields a yellow ball. 0.0625



b) (10 Points) Assume that the balls taken from the second and first urn are both yellow. Please quantify the probability that the ball drawn from the remaining urn is not yellow.

0.75



c) (20 Points) Please calculate the probability that not more than one yellow ball is drawn from the three urns. 0.4479



d) (20 Punkte) Please calculate the probability that you draw both colours in alternating order (starting with black or yellow). 0.1771



Die bestmögliche Lösung lautet:

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**Hint:** Please round your results - if necessary and if not asked otherwise - to **four** decimal places.

a) (10 Points) Please calculate the probability that every draw yields a yellow ball. 0.0625

b) (10 Points) Assume that the balls taken from the second and first urn are both yellow. Please quantify the probability that the ball drawn from the remaining urn is not yellow.  
0.25

c) (20 Points) Please calculate the probability that not more than one yellow ball is drawn from the three urns. 0.447916666666667

d) (20 Punkte) Please calculate the probability that you draw both colours in alternating order (starting with black or yellow). 0.177083333333333

Sie haben 50 von 60 möglichen Punkten erreicht.