

EoS - E-tutorial 04 - WiSe 2022/2023

StatRef.E.1.3.00050 (60 Punkte)

Sie haben die folgende Antwort gegeben:

There are three urns in front of you. Each urn is filled with black and yellow balls. The first urn contains 2 black and 6 yellow balls. The second urn is filled with 10 black and 5 yellow balls. The third one contains 2 black and 10 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. 0.2083



b) (10 Points) Assume that the balls taken from the first and second urn are both black. Please quantify the probability that the ball drawn from the remaining urn is not black. 0.8333



c) (20 Points) Please calculate the probability that not more than one black ball is drawn from the three urns. 0.7361



d) (20 Punkte) Please calculate the probability that you draw both colours in alternating order (starting with black or yellow). 0.4306



Die bestmögliche Lösung lautet:

There are three urns in front of you. Each urn is filled with black and yellow balls. The first urn contains 2 black and 6 yellow balls. The second urn is filled with 10 black and 5 yellow balls. The third one contains 2 black and 10 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. 0.20833333333333

b) (10 Points) Assume that the balls taken from the first and second urn are both black. Please quantify the probability that the ball drawn from the remaining urn is not black. 0.83333333333333

c) (20 Points) Please calculate the probability that not more than one black ball is drawn from the three urns. 0.73611111111111

d) (20 Punkte) Please calculate the probability that you draw both colours in alternating order (starting with black or yellow). 0.43055555555556

Sie haben 60 von 60 möglichen Punkten erreicht.