Lösungen Wahrscheinlichkeit Aufgabenblätter 1 - 6

Blatt 1: 1 a) 0.5 b) 0.3 c) 0.5 d) 0.7

2 a) $\frac{1}{18}$ b) $\frac{1}{36}$ c) $\frac{1}{6}$ d) $\frac{4}{9}$ e) $\frac{5}{36}$ f) $\frac{11}{36}$ g) $\frac{1}{6}$

3 a) $\frac{7}{72}$ b) $\frac{5}{12}$ 4a) $\frac{18}{35}$ b) $\frac{2}{35}$ d) 0.5 e) $\frac{1}{16}$

5 a) $\frac{10}{21}$ b) $\frac{3}{7}$ c) $\frac{2}{21}$ 6 $\frac{1}{120}$; $\frac{1}{6}$ 7 a) $\frac{25}{1296}$ b) $\frac{125}{648}$ c) $\frac{5}{54}$

8 $\frac{5}{55272}$ 9 $\frac{9}{64}$ 10 $\frac{1829}{2025}$ 11 $\frac{1}{60}$

Blatt 2: 1 a) $\frac{13}{276}$ b) $\frac{3}{506}$ c) $\frac{125}{132}$ 2 a) $\frac{55}{72}$ b) $\frac{1}{144}$ c) $\frac{11}{48}$

3 Theorie 4 $\frac{1}{20}$; $\frac{2}{3}$; $\frac{1}{3}$ 5 0.76

6 a) 0.760 b) 0.958 c) 0.793 7 a) 0.633 b) 0.395

Blatt 3: 1 $\frac{1}{108}$ 2 0.913 3 $1 - (1 - p)^n$ 4 0.36 5 $\frac{1}{3}$

6 a) 0.262 b) 0.72 c) 0.312 7 a) $\frac{11}{28}$ b) $\frac{33}{70}$

8 P(9) = $\frac{25}{216}$ P(10) = $\frac{27}{216}$ 9 38 cm

Blatt 4: 1 $\frac{1}{1296}$ 2 a) $\frac{7}{12}$ b) $\frac{31}{72}$ c) $\frac{6}{31}$ 3 5 4 $\frac{13}{21}$

5 $\frac{3}{8}$ 6 Nein; $\frac{91}{216}$ 7 a) 0.23 b) 0.32 8 0.234

Blatt 5: 1 $\mu = 8$, $\sigma = \sqrt{3}$ 2 Theorie 3 Theorie

4 a) c) -- b) $\mu = 2$, $\sigma = 1$ 5 $\frac{105}{512}$ 6 a) 0.179 b) 0.469

Blatt 6: 1 a) 0.037 b) 0.616 c) 0.564 $\mu = 5$, $\sigma = 2.18$

2 a) 0.58 0.34 0.07 0.006 0.0003 $3.3 \cdot 10^{-6}$

b) 0.59 0.33 0.07 0.008 0.0005 10^{-5}

3 a) A: 0.122 0.270 0.285 0.190 0.090

B: 0.359 0.377 0.189 0.060 0.013

b) 0.03231

4 E(X) = - $\frac{e}{37}$ = E(Y)

X	35e	-e
p	$\frac{1}{37}$	$\frac{36}{37}$

Y	8e	-e
p	$\frac{4}{37}$	$\frac{33}{37}$

5 E(X) = - 0.75; nein; 1.75