Statistik I - Exercise session 1
18.04.2017

Info

- Classroom: UL6 2097
- Time: Tuesdays, 10:15 - 11:45
- in English
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Preliminary schedule:

Date	Week	Exercises
18.04.2017	E1	1-1-c,e,g,i,k ; 1-2-a,b,d ; 1-3 ; 1-4 ; 1-5-a,b ; 1-6
25.04.2017	E2	1-7-c,d ; 1-8 ; 1-9-b; 1-10; 1-11-1,b
02.05.2017	E3	2-1; 2-2; 2-3; 2-7
09.05.2017	E4	2-9; 2-19, 2-20
16.05.2017	E5	TBA
23.05.2017	E6	TBA
30.05.2017	E7	TBA
06.06.2017	E8	TBA
13.06.2017	E8	TBA
20.06.2017	E9	TBA
27.06.2017	E10	TBA
04.07.2017	E11	TBA
11.07.2017	E12	TBA
18.07.2017	E13	TBA

Review

- Mathematical background:
  - Summation, Product
  - Root, Exponentiation, Logarithm
  - Binom. coef.

Exercises

E1-1

a) $6 \cdot 7 + 5 \cdot 3 - 3 \cdot 2 + 2 \cdot 4$
c) $(6 \cdot 7 + 5) \cdot 3 - 3 \cdot (2 + 2 \cdot 4)$
e) $(ab + c)d - d(e + fb)$
g) $2^3 \cdot 3^2 \cdot 2^{-1} \cdot 3^{-3}$
i) $(3 \cdot 4 \cdot 3)^{0.5}$
k) $a^2 b^{-3} a^4 c^{-2} b^{-1} c$

E1-2
Simplify:

a) $\frac{3a+b}{a^2-b^2} + \frac{2a}{a-b}$

b) $\frac{6xy^2-12xy^3}{9x^3y-33x^2y^2}$

d) $\frac{\frac{x}{y}-\frac{y}{x}}{\frac{1}{x}+\frac{1}{y}}$

E1-3
Compute/Simplify with a help of binom.form :
a) $(3xy-2)^2 + (3xy+2)^2$
b) 102^2

E1-4-A

Simplify:

a) $\left(\frac{1}{x^{-2}}\right)^{-3}$

b) $\left(\frac{x^4y^{-2}z^3}{a^3b}\right)^2$

E1-4-B

Rewrite as one root:

a) $x\sqrt[3]{y}$

b) $\sqrt[4]{x}\sqrt[6]{y}$

c) $\frac{\sqrt{xy^2}}{x\sqrt{y}}$

E1-5
A) Write as logarithm: $2^3 = 8.$
B) Compute: $7\log x - \log x^2 = 0.$
C) Simplify: $\log \prod_i a_i^{b_i}.$

E1-6-A

Compute

a) $\prod_{i=1}^{5}(i-3),$

b) $\prod_{i=1}^{5}(-1)^1.$

E1-6-B
What is the solution of $\prod_{i=1}^{2}(a+b)^i$?