1) $\mu = 1/118 \cdot \sum x_i = 1/118 \cdot 2328 = 129{,}33$

$x_z = 1/2 \cdot (x_9 + x_{10}) = 124$

Spannweite: $216 - 70 = 146$

Standardabweichung = Varianz = Summe über x_i^2

$\sigma^2 = 1/n \cdot \sum x_i^2 - \mu^2$ $\sigma = 39{,}049$

$\sum x_i^2 = 328.380$

$\sigma^2 = 1/118 \cdot 328.380 - 129{,}33^2$

$VC = \frac{\sigma}{\mu} = 39{,}049 / 129{,}33 = 30{,}201\ \%$

$$Q_{0,1} = x_{2} = 84$$
$$Q_{0,2} = x_{4} = 96$$
$$Q_{0,3} = x_{6} = 104$$

$$MAD = \frac{1}{n} \cdot \sum |x_i - x_2|$$

$$MAD = 29,7$$

5) $\mu_{Geom.} = \sqrt[7]{1{,}066 \cdot 1{,}041 \cdot 1{,}104 \cdot 1{,}114 \cdot 1{,}133 \cdot 1{,}078 \cdot 1{,}012}$

$\mu_{Geom} = 1{,}0775 \approx 7{,}8\,\%$

$\sigma = \sqrt{1/7 \cdot (1{,}066^2 + 1{,}041^2 + \ldots + 1{,}012^2) - 1{,}0775^2}$

$\sigma = 0{,}0469$

7) $\mu_{harm.} = \frac{100 + 50 + 50 + 100}{\frac{100}{80} + \frac{50}{110} + \frac{50}{150} + \frac{100}{60}} = \frac{300}{\ldots}$

$\mu_{harm} = 81,82$

8)

x_i	0	1	2	3	4	5	6	7
$h(x_i)$	2	4	5	10	9	8	4	8
$f(x_i)$	$2/50$	$4/50$	$5/50$	$10/50$	$9/50$	$8/50$	$4/50$	$8/50$
x_i^2	0	1	4	9	16	25	36	49

$Q_{0,3} = x_{15} = 3$

$x_2 = 4$

$Q_{0,8} = x_{40} = 6$

$\mu = 1/50 \cdot (0 + 4 + 10 + 30 + 36 + 40 + 24 + 56) = 200/50 = 4$

$\delta^2 = 1/50 \cdot (0 + 4 + 20 + 90 + 144 + 200 + 196 + 392) = 996/50 \approx 20$

x_M (Modal) $= 3$, da $h(3) = 10$ max.

$\delta = 1{,}97$