Aufgabe 1 Abzugeben sind (e), (h), (i), (k) und (m). $1P + 1P + 1P + 1P + 1P = 5P$	
Es seien $n,k\in\mathbb{N}$. Geben Sie für jede der folgender Mengen an, wie man ihre Mächtigkeit berechnen kann (nicht nach	
Schwierigkeit geordnet):	
(a) $A := \{ \mathcal{P} \subseteq 2^{[n]} \mid \mathcal{P} \text{ ist eine Partition von [n]} \}.$ (b) $B := \{ \mathcal{P} \in A \mid \mathcal{P} = k \}.$.05.2012
$ (b) B := \{P \in A \mid P = k\}. $ $ (c) C := \{f : [k] \to [n]\}. $	
$(c) = \{f : [n] \mid f \text{ surjektiv } \}.$	
(e) $E := \{f : [k] \rightarrow [n] \mid f \text{ injektiv } \}.$	
(f) $F := \{f : [k] \rightarrow [n] \mid f \text{ bijektiv } \}.$	
(a) P = 2 Partition	
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maximal n Klassen	
(6) B= 3 P= 2 ^{En3} 191-k3	
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2 Stirling-Zahlen 2. Art:	
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(C)
$$C = 2 f : [k] \rightarrow [n]$$
 $|C| = nk$
 $|$

(f)
$$F = \{f: [k] - [n] | f bijektiv\}$$

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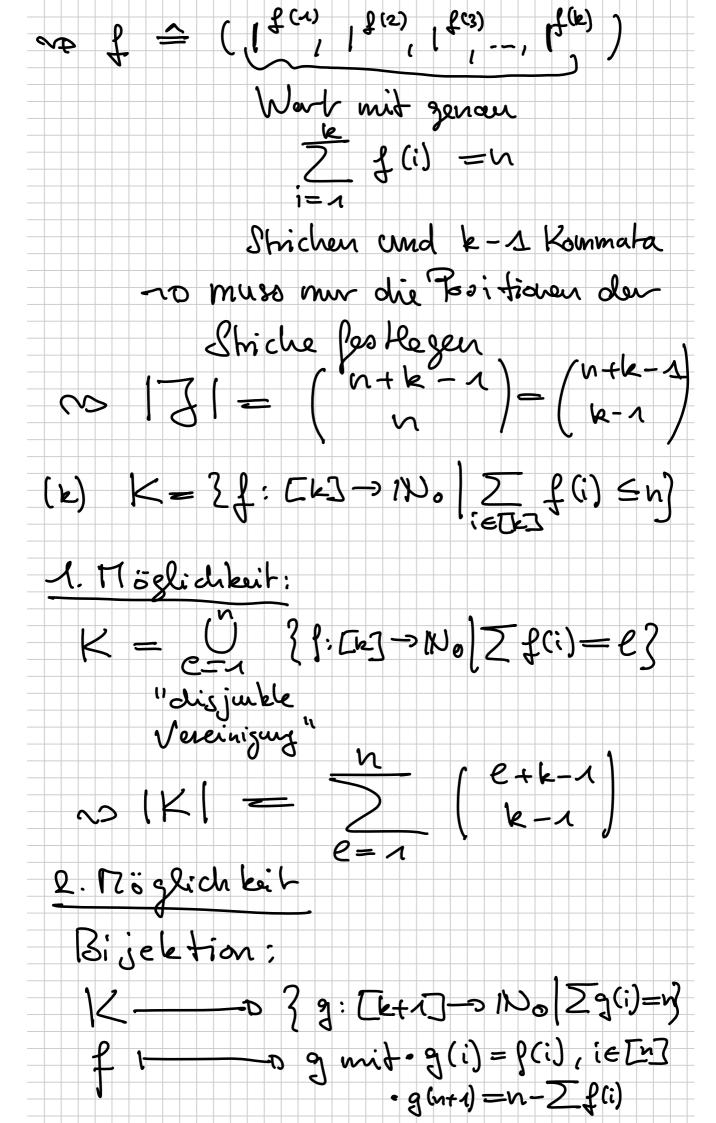
$$|F| = \{S | falls | n \neq k \}$$

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No
$$|K| = \binom{n+k+r-1}{k+r-1}$$

No Nebentesulbat:
$$\binom{n+k}{k} = \sum_{\ell \in [r]} \binom{\ell+k-1}{k-1}$$

$$\binom{\ell}{k} = \sum_{\ell \in [r]} \binom{\ell+k-1}{k-1}$$

$$\binom{\ell}{k} = \sum_{\ell \in [r]} \binom{\ell+k-1}{k-1}$$

$$\binom{\ell}{k} = \sum_{\ell \in [r]} \binom{\ell+k-1}{k-1}$$

$$\binom{n-k}{k} = \sum_{\ell \in [r]} \binom{n-1}{k-1}$$

$$\binom{n}{k} = \binom{n-k}{k} = \binom{n}{k}$$

$$\binom{n}{k} = \binom{n-k+k}{k} = \binom{n}{k}$$

