

Areas	A	Size of the study area : pl. m ² , ha , km ²	1 ha = 10 000 m ² 1 km ² = 100 ha = 1 000 000 m ²
	a	Size of one quadrat (pl. m ² , ha, km ²)	
	r	Number of studied quadrats (pc)	
		Ratio of surveyed area	$r * a / A$
	K	Maximum number of quadrats could cover the study area (pc)	$K = A / a$

kvadrats	i	The serial number of the surveyed quadrat	
	n_i	number of individuals in ith quadrat	
	n'	mean number of individuals in quadrat	$n' = \sum_{i=1}^r n_i / r$
	S_{n'}²	Variance	$S_{n'}^2 = \sum_{i=1}^r (n_i - n')^2 / (r-1)$

i	n _i	n _i -n'	(n _i -n') ²
1	5	0.5	0.25
2	0	-4.5	20.25
3	3	-1.5	2.25
4	2	-2.5	6.25
5	7	2.5	6.25
6	10	5.5	30.25
Σ =	27		65.5
n' =	27/6	=	4.5

itt: r = 6

$S_{n'}^2 = \frac{65.5}{6-1} = 13.1$

Population size	N'	Estimated population size (individual)	$N' = n' * K$
	S_{N'}²	Variance of the population estimate	$S_{N'}^2 = K * (K-r) / r * s_{n'}^2$
	S_{N'}	Standard deviation of the population estimate	$S_{N'} = \sqrt{S_{N'}^2}$

N'_{min}	95 % confidence interval of N' minimum	$N'_{min} = N' - 1,96 * S_{N'}$
N'_{max}	95 % confidence interval of N' maximum	$N'_{max} = N' + 1,96 * S_{N'}$

Distributi	distribution of individuals	distribution = $s_{n'}^2 / n'$
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