Assumes a study on a rodent species over an area of 120 ha (1 ha = 10,000 m^2). It is found that rodents live only in scattered areas that account for a quarter of the region's area. A first sample of 200 individuals is captured, tagged and released. Later, a second sample of 200 individuals is captured. It is then observed that 20% of the animals of the first sample have been recaptured. (Answer the following questions by showing your calculations.) (5 pts)

A) Using these data, estimate the size of the total population.
B) What is the density of the rodent population (in individuals per hectare)?
C) What is the method of distribution of rodents?

Answer:

A) Size of the total population = 200·0.8 + 200 = 360 animals
B) 360/(120·0.25) = 12 animals/hectare
C) Method of distribution of rodents is uneven.