

Solutions

2.1 B Estimate total abundance by multiplying mean density by area, with consistent units. This assumes sampled areas represent the habitat. Patchiness and too few samples widen uncertainty.

2.2 $\text{density} = \text{mean count} / \text{area} = 6 / 0.5 = 12 \text{ plants/m}^2$.

2.3 False. Quadrats suit organisms that do not move quickly. A food chain arrow shows the direction of energy transfer, not the direction a predator travels.

2.4 quadrat. quadrat means A defined area used for sampling.

3.1 Densities = 24 and 18 plants/m². The larger raw count has lower density. Random or stratified random positions, equal sampling effort and repeats reduce location bias; record uncertainty before extrapolation.