

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 density=mean count/area= $6/0.5=12$ plants/m².

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.