Name:
Date:

Quiz #13

Recall the formula for the standard error of a mean:

$$\mathrm{SE}(\bar{x}) = \frac{s}{\sqrt{n}}$$

The table below has three pairs of samples, summarized by size, mean, standard deviation. In one pair, sample 1 has the wider 95% CI. In another pair, sample 2 has the wider 95% CI. In the remaining pair, the CIs are the same width. Which is which?

Population	**Sample 1**	**Sample 2**
Density of invasive green crabs in San Francisco Bay	40 sites in The Bay with mean density 2.3 crabs m^2 and standard deviation of 0.5 crabs m^2	20 sites in The Bay with mean density 4.1 crabs m^2 and standard deviation of 0.5 crabs m^2
PM 2.5 air pollution in parks near I-5	100 monitoring stations along I-5 with mean PM 2.5 of 100 µg/m³ and standard deviation of 15 µg/m³	100 monitoring stations along I-5 with mean PM 2.5 of 200 µg/m³ and standard deviation of 15 µg/m³
Biomass of native grasses in pastures under regenerative pasture management	50 pastures with mean native grass biomass of 800 kg ha^{-1} and standard deviation of 150 kg ha^{-1}	50 pastures with mean native grass biomass of 800 kg ha^{-1} and standard deviation of 100 kg ha^{-1}