Answer on Question #51358 – Math – Algebra

In purchasing food for a political rally, you erroneously order shucked medium-size Pacific oysters (which come 8 to 12 per U.S. pint) instead of shucked medium-size Atlantic oysters (which come 26 to 38 per U.S. pint). The filled oyster container shipped to you has the interior measure of 1.4 m x 17 cm x 26 cm, and a U.S. pint is equivalent to 0.4732 liter. By how many oysters is the order short of your anticipated count? Assume 10 oysters per pint for Pacific oysters and 32 oysters per pint for Atlantic oysters

Solution

Volume of container: $\boldsymbol{V = 140 * 17 * 26\ cm^3 = 61880\ cm^3 = 61.88\ l.}$

Pints in container: $\boldsymbol{p = \frac{V}{0.4732} = \frac{61.88}{0.4732} \approx 130.77.}$

Atlantic oysters in container: $\boldsymbol{A = p * 32 = 4184.6 \approx 4185.}$

Pacific oysters in container: $\boldsymbol{P = p * 10 = 1307.7 \approx 1308.}$

Short of anticipated count: $\boldsymbol{A - P = 4185 - 1308 = 2877.}$