Checking Density in a Model Resin Float

Scoring guide · one credit per question · review written work against each rubric

Checking Density in a Model Resin Float

Question 1

The solid is 48/40 = 1.20 g/cm³. The foam is 24/40 = 0.60 g/cm³.

Question 2

Choice (3)

The solid is denser than water, while the foam is less dense.

Question 3

Its new average density is 24/22, or about 1.09 g/cm³. That is greater than 1.00 g/cm³, so the model predicts it sinks.

Question 4

The average density includes the air spaces as well as the resin. Sealed air spaces can reduce mass for a given outside volume while the resin itself stays the same.