# Checking Why a Soaked Block Sinks

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

### Checking Why a Soaked Block Sinks

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### Question 1

Choice (2)

P has density 12/20 = 0.60 g/cm³. Q has density 22/20 = 1.10 g/cm³ and sinks.

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### Question 2

P retains 12 − 12 = 0 g. Q retains 22 − 12 = 10 g.

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### Question 3

Both dry densities are 0.60 g/cm³. Q takes on 10 g of water with no outside volume increase, giving 1.10 g/cm³. P stays at 0.60 g/cm³.

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### Question 4

Its enclosed mass is 12 + 7 = 19 g in 20 cm³. The density is 0.95 g/cm³, below 1.00 g/cm³, so it floats.