NAME _____ DATE _____ CLASS _____

Section 9-1

HOLT PHYSICS

Concept Review

Fluids and Buoyant Force

A raft is made of a plastic block with a density of 650 kg/m^3, and its dimensions are 2.00 m × 3.00 m × 5.00 m.

1. What is the volume of the raft?

_____

2. What is its mass?

_____

3. What is its weight?

_____

4. What is the raft's apparent weight in water?
(Hint: density of water = 1.00×10^3 kg/m^3)

_____

5. What is the buoyant force on the raft in water?

_____

6. What is the mass of the displaced water?

_____

7. What is the volume of the displaced water?

_____

8. How much of the raft's volume is below water? How much is above?

_____

9. Answer items 5–8 using ethanol (density = 0.806×10^3 kg/m^3) instead of water.

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