

- 15** A solid cube is floating in equilibrium in liquid mercury. The cube is made of iron of density  $7900 \text{ kg m}^{-3}$ .

The cube floats with 42% of its volume above the surface of the mercury.

What is the density of the mercury?

- A**  $3300 \text{ kg m}^{-3}$
- B**  $4600 \text{ kg m}^{-3}$
- C**  $14\,000 \text{ kg m}^{-3}$
- D**  $19\,000 \text{ kg m}^{-3}$