6   A 50 g piece of ice is added to a cup containing 250 cm^3 of water.

Given that the density of water and ice is 1000 kg m^{-3} and 900 kg m^{-3} respectively, after all the ice has melted, the volume of water in the cup will

A   remain unchanged.

B   increase by 17 %.

C   increase by 20 %.

D   increase by 22 %.