10 The density of water is $1.0\,g\,cm^{-3}$ and the density of glycerine is $1.3\,g\,cm^{-3}$.

Water is added to a measuring cylinder containing $40\,cm^3$ of glycerine so that the density of the mixture is $1.1\,g\,cm^{-3}$. Assume that the mixing process does not change the total volume of the liquid.

What is the volume of water added?

A $40\,cm^3$ **B** $44\,cm^3$ **C** $52\,cm^3$ **D** $80\,cm^3$