Answer on Question #59912, Chemistry / General Chemistry

1. Find the molarity of pure water if its density at room temperature is 1g/cm³.

Solution:

If the volume of water 1L:

$m = \rho \times V$

$m = 1g/cm^3 \times 1000mL = 1000g$

$M (H_2O) = 18$ g/mol

$C_M = \dfrac{m}{M \times V}$

$C_M = \dfrac{1000}{18 \times 1} = 55.56$ mol/L

Answer: molarity = 55.56 mol/L.