Question #53009, Physics / Mechanics | Kinematics | Dynamics |

Problem: A liquid at 20 ^{0}C has a density of 798.4kg/m^3 and a kinematic viscosity of $2.3 \cdot 10^{-6}$m^2/s. Determine its (i) specific weight and (ii) absolute viscosity.

Answer the question:

(1) Specific weight:

γ = ρ·g,
where ρ – density, g= 9,8 H/kg - acceleration of gravity,

γ = 798,4 kg/m^3 · 9,8 H/kg = 7824,32 kg/ m^3 .

(2) Absolute viscosity:

η = ν·ρ,
where ν - kinematic viscosity,
η = $2.3 \cdot 10^{-6}$m^2/s · 798,4 kg/m^3 = 2075,84 m^2/s.