

① Find $\int_1^2 \int_3^4 \int_5^6 \ln(x+2y+3z) dx dz dy$. HW 35

② The region of integration for ① is $[_ , _] \times [_ , _] \times [_ , _]$.
(Fill in the blanks.)

③ Find average value of $\varphi = \cos^{-1}\left(\frac{z}{\sqrt{x^2+y^2+z^2}}\right)$ in the cube $[1, 5]^3$. You may need a calculator/computer to find a decimal answer. I don't believe there is an exact formula.