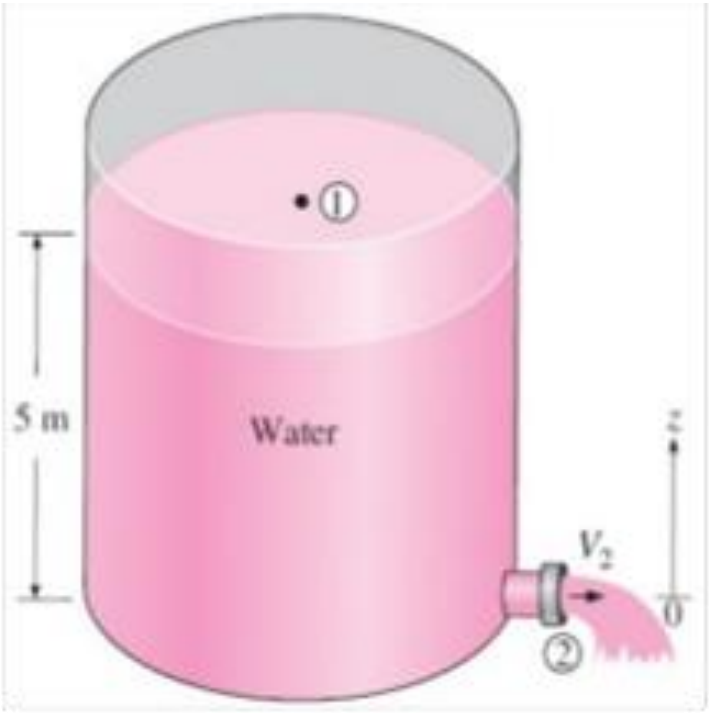
A large tank open to the atmosphere is filled with water to a height of 5 m. A tap near the bottom of the tank is opened, and water flows out from the smooth and rounded outlet. Determine the water velocity at the outlet.



$$Bernoulli\ equation: \quad \frac{p_1}{\rho g} + z_1 + \frac{{v_1}^2}{2g} = \frac{p_2}{\rho g} + z_2 + \frac{{v_2}^2}{2g}$$

$$0 + z_1 + 0 = 0 + 0 + \frac{{v_2}^2}{2g}$$

$$v_2 = \sqrt{2gz_1} = \sqrt{2 \times 9.81 \times 5} = 9.9 \text{ m/s}$$