

Exercice b : Equation de Torricelli

① $h = 3 \text{ m}$

$$v = \sqrt{2gh} = \sqrt{2(9.81)(3)} = 7.67 \text{ m/s}$$

$$v = 7.67$$

② $v_2 = 20 \text{ mm} = 0.02 \text{ m}$ $t_{m_1 - m_2} = \left(\frac{0.09999}{0.00393} \right)$

$$(\sqrt{7.7} - \sqrt{0.2}) = 21.775 \text{ s}$$

$$v = \sqrt{2g(1.5)} = 5.4249 \text{ m/s}$$

③ $h = 20 \text{ m}$ $v = \sqrt{2gh} = \sqrt{2(9.81)(20 \text{ m})} = 19.80 \text{ m/s}$
 $r = 5 \text{ cm}$

$$(\pi 6 \text{ s}^2)(19.809) = 0.1555 \text{ m}^3/\text{s}$$

$$C = 9.3348 \text{ m}^3/\text{min}$$

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