

2)



$$a) R_A = \sqrt{2m(E - V_A)} \quad \checkmark$$

$$= \frac{2\pi}{h} \sqrt{2m \left(\frac{9h^2}{32mL^2} - \frac{h^2}{4mL^2} \right)}$$

$$= \frac{2\pi}{h} \sqrt{2m \times \frac{h^2}{32mL^2}} = \frac{2\pi}{4L} = \frac{\pi}{2L} \quad \checkmark$$

$$R_B = \sqrt{2m(E - V_B)}$$

$$= \frac{2\pi}{h} \sqrt{2m \left(\frac{9h^2}{32mL^2} - 0 \right)}$$

$$= \frac{2\pi}{h} \times \frac{3h}{4L} = \frac{3\pi}{2L} \quad \checkmark$$

$$R_C = R_A \text{ Since } V_A = V_C = \frac{h^2}{4mL^2}$$

$$\therefore R_C = \frac{\pi}{2L} \quad \checkmark$$

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