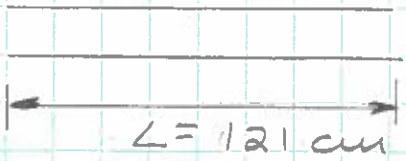
a.)



open at both ends.

for open-open tube:

$$\lambda_m = \frac{2L}{m} \qquad m = 1, 2, 3, \ldots$$

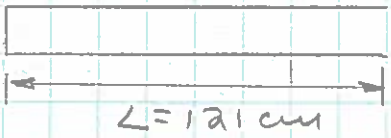
So:

$$\lambda_1 = 2L = \underline{242 \text{ cm}}$$

$$\lambda_2 = L = \underline{121 \text{ cm}}$$

$$\lambda_3 = \frac{2L}{3} = \underline{80.67 \text{ cm}}$$

b.)



closed at one end

For open-closed tube:

$$\lambda_m = \frac{4L}{m} \qquad m = 1, 3, 5, 7$$

So:

$$\lambda_1 = 4L = \underline{484 \text{ cm}}$$

$$\lambda_2 = \frac{4L}{3} = \underline{161.3 \text{ cm}}$$

$$\lambda_3 = \frac{4L}{5} = \underline{96.8 \text{ cm}}$$