# PENJABARAN RUMUS FISIKA DASAR 2

## MODUL 5
## VOLTMETER & AMPERE

### *Gambar 5.13

$I_1 = \frac{V_1}{R_1}$

$\sum I_1 = I_{1_1} + I_{1_2} + I_{1_3} + I_{1_4}$

$\sum I^2 = I_{1_1}^2 + I_{1_2}^2 + I_{1_3}^2 + I_{1_4}^2$

$\bar{I} = \frac{\sum I}{n} \rightarrow \ldots \quad ; \bar{I}^2 =$

$\Delta I = \sqrt{\frac{\sum I^2 - n.\bar{I}^2}{n(n-1)}}$

AP =

$Penulisan\ (\bar{I}_1 \pm \Delta I\ )$

$KTP = \frac{\Delta I}{\bar{I}} \times 100\%$

$I_2 = \frac{V_2}{R_2}$

$\sum I_2 = I_{2_1} + I_{2_2} + I_{2_3} + I_{2_4}$

$\sum I^2 = I_{2_1}^2 + I_{2_2}^2 + I_{2_3}^2 + I_{2_4}^2$

$\bar{I} = \frac{\sum I}{n} \rightarrow \ldots \quad ; \bar{I}^2 =$

$\Delta I = \sqrt{\frac{\sum I^2 - n.\bar{I}^2}{n(n-1)}}$

AP =

$Penulisan\ (\bar{I}_2 \pm \Delta I\ )$

$KTP = \frac{\Delta I}{\bar{I}} \times 100\%$

### *Gambar 5.14

**Buktikan bahwa** $\varepsilon = V_1 + V_2$

$V_1 = I_1 \times R_1$

$V_2 = I_2 \times R_2$

$\varepsilon = V_1 + V_2$

### *Gambar 5.15

$r_g = \frac{I_2.R}{I_3}$

$\sum r_g = r_{g_1} + r_{g_2} + r_{g_3} + r_{g_4} + r_{g_5}$

$\sum r_g^2 = r_{g_1}^2 + r_{g_2}^2 + r_{g_3}^2 + r_{g_4}^2 + r_{g_5}^2$

$\bar{r_g} = \frac{\sum r_g}{n} \rightarrow \ldots \quad ; \bar{r_g}^2 =$

$\Delta r_g = \sqrt{\frac{\sum {r_g}^2 - n.\bar{r_g}^2}{n(n-1)}}$

AP =

$Penulisan\ (\bar{r_g} \pm \Delta r_g\ )$

$KTP = \frac{\Delta r_g}{\bar{r_g}} \times 100\%$

### * Gambar 5.16

V$= I \times R$

$\sum V = V_1 + V_2 + V_3 + V_4$

$\sum V^2 = V_1^2 + V_2^2 + V_3^2 + V_4^2$

$\bar{\mathrm{V}} = \frac{\sum V}{n} \rightarrow \ldots \quad ; \bar{V}^2 =$

$\Delta V = \sqrt{\frac{\sum V^2 - n.\bar{V}^2}{n(n-1)}}$

AP =

$Penulisan\ (\bar{\mathrm{V}} \pm \Delta V\ )$

$KTP = \frac{\Delta \mathrm{v}}{\bar{\mathrm{V}}} \times 100\%$

### * Gambar 5.17

Buktikan bahwa

$I_1 = I_2 + I_3$

## MODUL 6 – OPTIK

❖ **Lensa Cembung ( +50 & +100)**

$$\frac{1}{f} = \frac{1}{s} + \frac{1}{s'}$$

$$f = \frac{s.s'}{s+s'}$$

Hasilya harus sama perhitungan kedua rumus ini

$$M = \left|\frac{s'}{s}\right|$$

❖ **Lensa Gabungan**

$$\frac{1}{f_1} = \frac{1}{s_1} + \frac{1}{s_1'}$$

$$\frac{1}{f_2} = \frac{1}{s_2} + \frac{1}{s_2'}$$

$$ff = \frac{D^2 - d^2}{4.D}$$

$$\frac{1}{f_{gab}} = \frac{1}{f_1} + \frac{1}{f_2} - \frac{t}{ff \cdot f_2}$$