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### Tugas fisika

Notes on the left page:

Rangkaian Seri

Diagram 1: A series circuit with three resistors labeled  $10k$ ,  $15k$ , and  $?$ . The total voltage is given as  $V = 3V$ . The current through the circuit is calculated as  $I = \frac{V}{R_{total}} = \frac{3}{10k + 15k} = 0,00005 A$ .

Diagram 2: A series circuit with resistors  $28,5$ ,  $70$ , and  $150$ . The total voltage is given as  $V = 15V$ . The current through the circuit is calculated as  $I = \frac{V}{R_{total}} = \frac{15}{28,5 + 70 + 150} = 0,072 A$ .

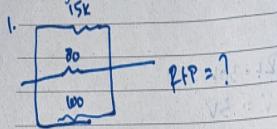
Diagram 3: A series circuit with resistors  $25k$ ,  $15k$ , and  $?$ . The total voltage is given as  $V = 5V$ . The current through the circuit is calculated as  $I = \frac{V}{R_{total}} = \frac{5}{25k + 15k} = 0,0002 A$ .

Table on the right page:

	$I = ?$	$\frac{V}{R_{total}} = 0,00005 A$	$R_{total} = 60k \Omega$
1. Hijau	oren	hitam	$= 53,52 \text{ } 10\%$
2. Kuning	merah	merah	$= 420,52 \text{ } 20\%$
3. hijau	hijau	oren	$= 55k \Omega \text{ } 10\%$
4. oren	oren	kuning	$= 330,52 \text{ } 10\%$
5. Abu	hitam	merah	$= 810,52 \text{ } 5\%$
6. ungu	hijau	hitam	$= 75,52 \text{ } 20\%$
7. ungu	merah	ungu	$= 720,52 \text{ } 10\%$
8. hijau	hijau	hijau	$= 5,5M \Omega \text{ } 20\%$
9. Biru	oren	oren	$= 65k \Omega \text{ } 5\%$
10. Kuning	biru	biru	$= 45M \Omega \text{ } 20\%$

No. \_\_\_\_\_

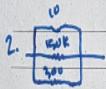
Date \_\_\_\_\_

**Rangkaian Paralel**

$$\frac{1}{R_T} = \frac{1}{15k} + \frac{1}{80} + \frac{1}{100}$$

$$\frac{1}{R_T} = \frac{1}{15k} + \frac{300}{15k} + \frac{1}{15k}$$

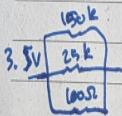
$$= \frac{451}{15k} = \frac{15k}{451} = 33,25 \Omega$$



$$R_T = \frac{1}{10} + \frac{1}{15k} + \frac{1}{200}$$

$$R_T = \frac{1}{100} + \frac{15k}{150k} + \frac{750}{150k}$$

$$= \frac{15751}{150k} = \frac{150k}{15751} = 9,52 \Omega$$



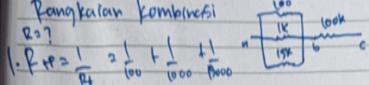
$$I_1 = ? = 1 = \frac{5}{150} = 0,00003 A$$

$$I_2 = ? = 1 = \frac{2}{25k} = 0,0002 A$$

$$I_3 = ? = 1 = \frac{5}{100} = 0,05 A$$

No. \_\_\_\_\_

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**Rangkaian Kombinasi**

$$\frac{1}{R_T} = \frac{1}{150k} + \frac{1}{100k} + \frac{1}{100k}$$

$$= \frac{10}{150k} + \frac{1}{100k} + \frac{1}{100k}$$

$$= \frac{20}{150k} = \frac{2k}{150k} = \frac{1000}{150k} = 38,4$$

$$R_{TP} = 38,4$$

$$R_T = 38,4 \Omega + 100k = 100,038 \Omega$$

2. berapa Vdc. bila I = 2A

$$V = 1 \cdot R$$

$$= 2 \cdot 100,038 \Omega$$

$$= 200,076 V = 2 kV$$



bila I = 2A

$$V = 15V$$

$$R_3 = ?$$

$$R = \frac{V}{I} = \frac{15}{2} = 7,5 \Omega$$

hasil 150k x R\_{TP}

$$R_{TP} = 0,0005$$

$$(150k \times 0,0005) = 7,5$$

$$\frac{1}{R_T} = \frac{1}{100k} + \frac{1}{90k} + \frac{1}{7,5} \rightarrow 10M$$

$$\frac{1}{R_T} = 100 + 97 + 10M$$

$$I = 10.000 \cdot 147$$

$$\frac{1}{R_T} = \frac{1000}{10.000 \cdot 147} = 0,00005 = 150k \times 0,00005$$

$$= 7,5k \Omega$$

7 mm ruled X 35 lines