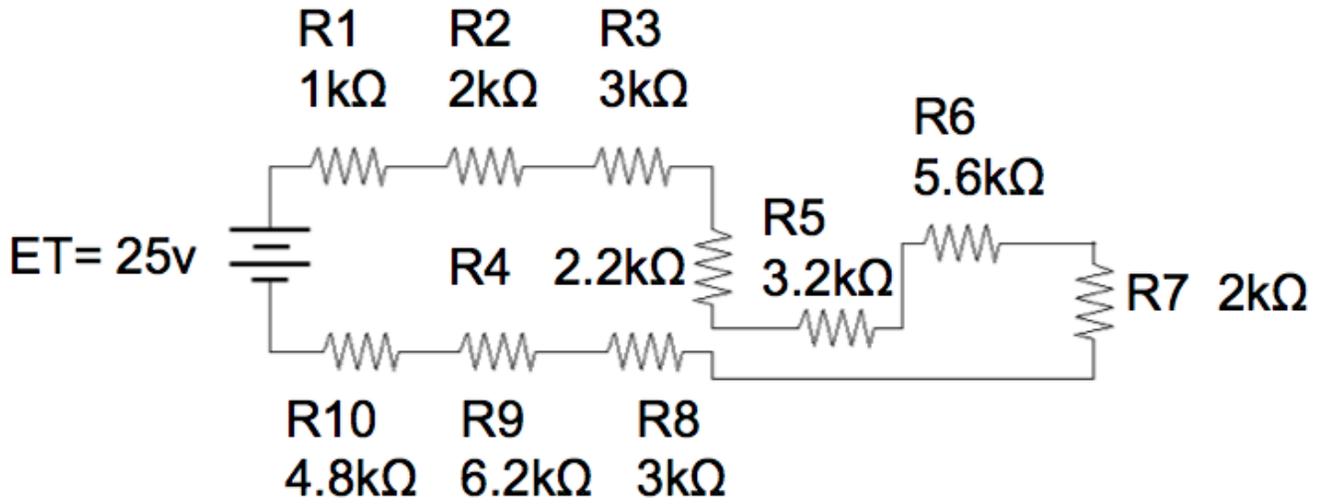




Basic Electricity – Unit 6: Other Basic Circuit Fundamentals

Test 1





Basic Electricity – Unit 6: Other Basic Circuit Fundamentals

Test 1

ET	=	_____
RT	=	_____
IT	=	_____
PT	=	_____

R 1	=	_____
ER 1	=	_____
IR 1	=	_____
PR 1	=	_____

R 2	=	_____
ER 2	=	_____
IR 2	=	_____
PR 2	=	_____

R 3	=	_____
ER 3	=	_____
IR 3	=	_____
PR 3	=	_____

R 4	=	_____
ER 4	=	_____
IR 4	=	_____
PR 4	=	_____

R 5	=	_____
ER 5	=	_____
IR 5	=	_____
PR 5	=	_____

R 6	=	_____
ER 6	=	_____
IR 6	=	_____
PR 6	=	_____

R 7	=	_____
ER 7	=	_____
IR 7	=	_____
PR 7	=	_____

R 8	=	_____
ER 8	=	_____
IR 8	=	_____
PR 8	=	_____

R 9	=	_____
ER 9	=	_____
IR 9	=	_____
PR 9	=	_____

R 10	=	_____
ER 10	=	_____
IR 10	=	_____
PR 10	=	_____

NAME _____

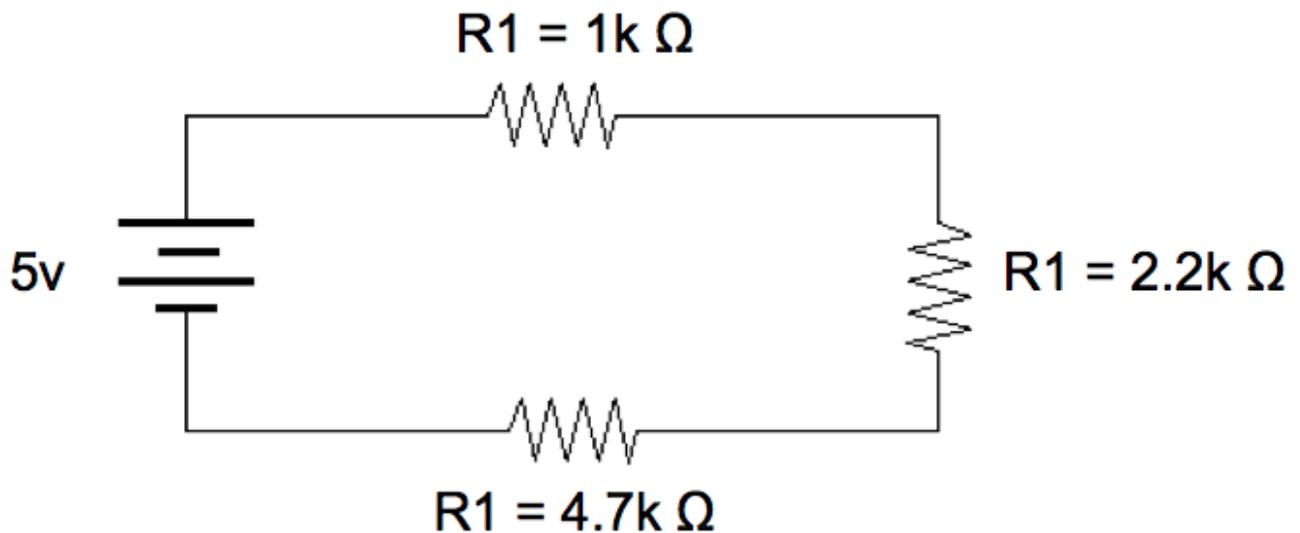




Basic Electricity – Unit 6: Other Basic Circuit Fundamentals

Test 1

- Build the circuit on the breadboard.
- Measure the total resistance.
- Measure ET.
- Measure IT.
- Measure ER1.
- Measure ER2.
- Measure ER3.





Basic Electricity – Unit 6: Other Basic Circuit Fundamentals

Test 1

Solution:

$$\begin{aligned}ET &= 25\text{v} \\RT &= 33\text{k ohm} \\I_t &= .0007575757575757576\end{aligned}$$

$$I_1 = I_2 = I_3 = I_4 = I_5 = I_6 = I_7 = I_8 = I_9 = I_{10}$$

$$\begin{aligned}ER_1 &= 0.7575757575757576 \text{ v} \\ER_2 &= 1.515151515151515 \text{ v} \\ER_3 &= 2.272727272727273 \text{ v} \\ER_4 &= 1.666666666666667 \text{ v} \\ER_5 &= 2.424242424242424 \text{ v} \\ER_6 &= 4.242424242424242 \text{ v} \\ER_7 &= ER_2 = 1.515151515151515 \text{ v} \\ER_8 &= ER_3 = 2.272727272727273 \text{ v} \\ER_9 &= 4.696969696969697 \text{ v} \\ER_{10} &= 3.636363636363636 \text{ v}\end{aligned}$$

$$\begin{aligned}PR_1 &= 5.73921028466483\text{e-4 W} \\PR_2 &= 0.001147842056933 \text{ W} \\PR_3 &= 2.272727272727273 \text{ W} \\PR_4 &= 0.0012626262626263 \text{ W} \\PR_5 &= 0.0018365472910927 \text{ W} \\PR_6 &= 0.0032139577594123 \text{ W} \\PR_7 &= PR_2 = 0.001147842056933 \text{ W} \\PR_8 &= PR_3 = 2.272727272727273 \text{ W} \\PR_9 &= 0.0035583103764922 \text{ W} \\PR_{10} &= 0.0027548209366391 \text{ W}\end{aligned}$$





Basic Electricity – Unit 6: Other Basic Circuit Fundamentals

Test 1

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