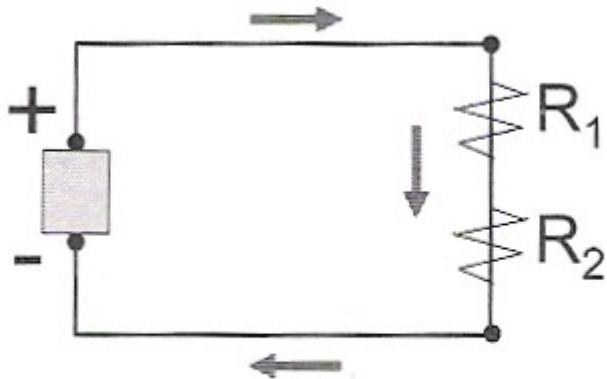


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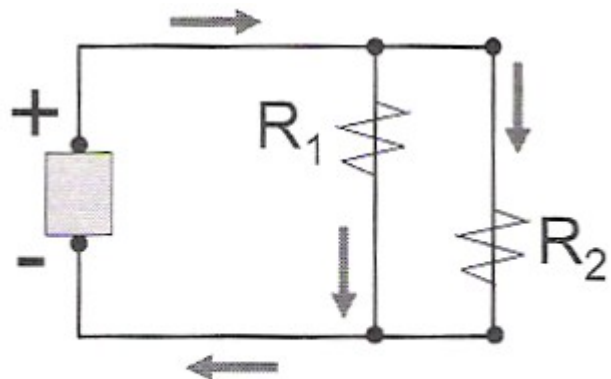
Exam 1, Program

Shocking – Absolutely Shocking!

Resistors in a circuit can be organized in *series* or in *parallel*. The diagrams below show the difference:



resistors in series



resistors in parallel

In the case of series resistors, the *effective resistance* is simply the sum of the individual resistors. For parallel resistors, the effective resistance is computed as:

$$R_{eff} = \frac{1}{\frac{1}{R_1} + \frac{1}{R_2} + \dots + \frac{1}{R_n}}$$

Collect values from the user for five **parallel** resistors. Compute the effective resistance for the five resistors, but only if all values provided are positive – zero or negative values will cause the program to print an error message and the program should terminate gracefully.

If all five values are positive, create a table like the one shown in the example run below. Align all values as shown. Use escape sequences, width-specifiers, and precision-specifiers in your format strings.

```
Resistor 1: 100
Resistor 2: 250
Resistor 3: 325
Resistor 4: 1500
Resistor 5: 76.2
```

R1	R2	R3	R4	R5	Reff
100.0	250.0	325.0	1500.0	76.2	32.4

```
Resistor 1: 100
Resistor 2: -200
Resistor 3: 300
Resistor 4: 400
Resistor 5: 0
```

ERROR: Not all values are positive!

These resistors were not positive: R2 R5

Constraints

Do not use any functions to terminate the program. You may not assume the user will provide only positive values.

10% Extra Credit (as shown in the run above, right)

For the error message, display not only the message but also state which resistor values were not positive.