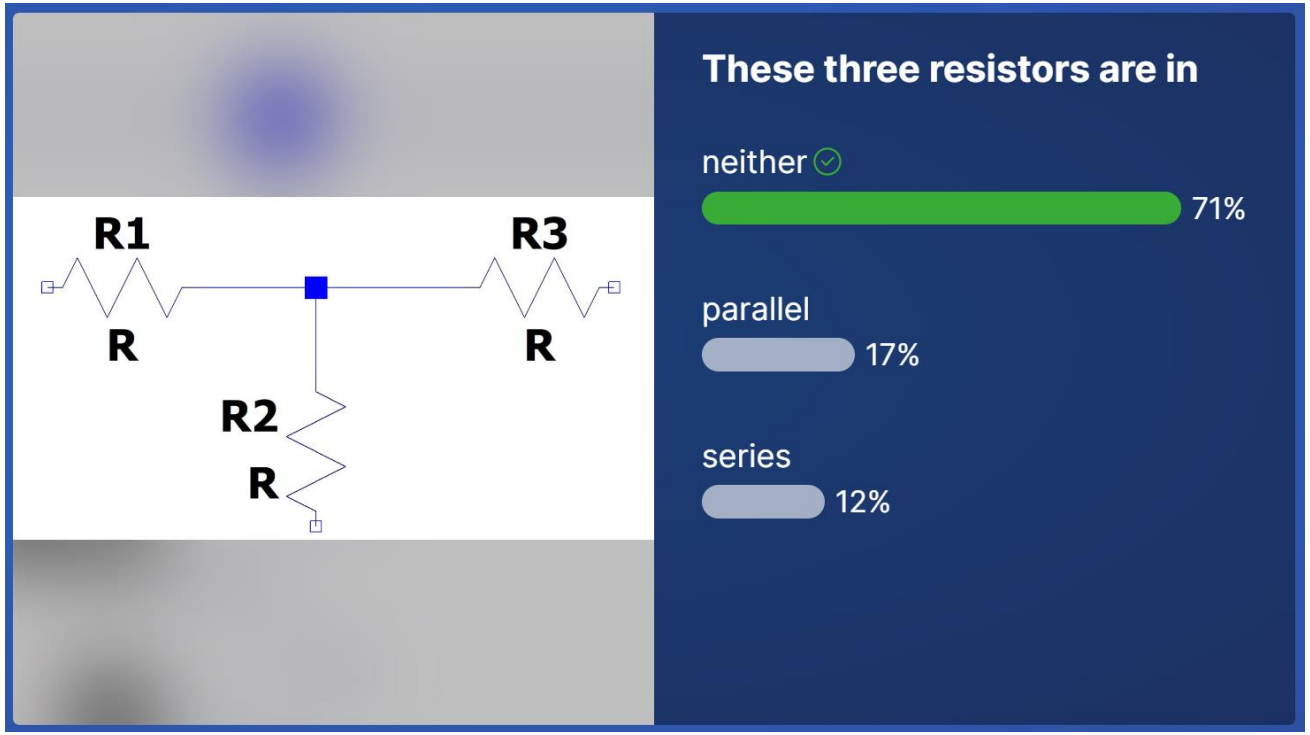
Q1) Resistors in Series and Parallel

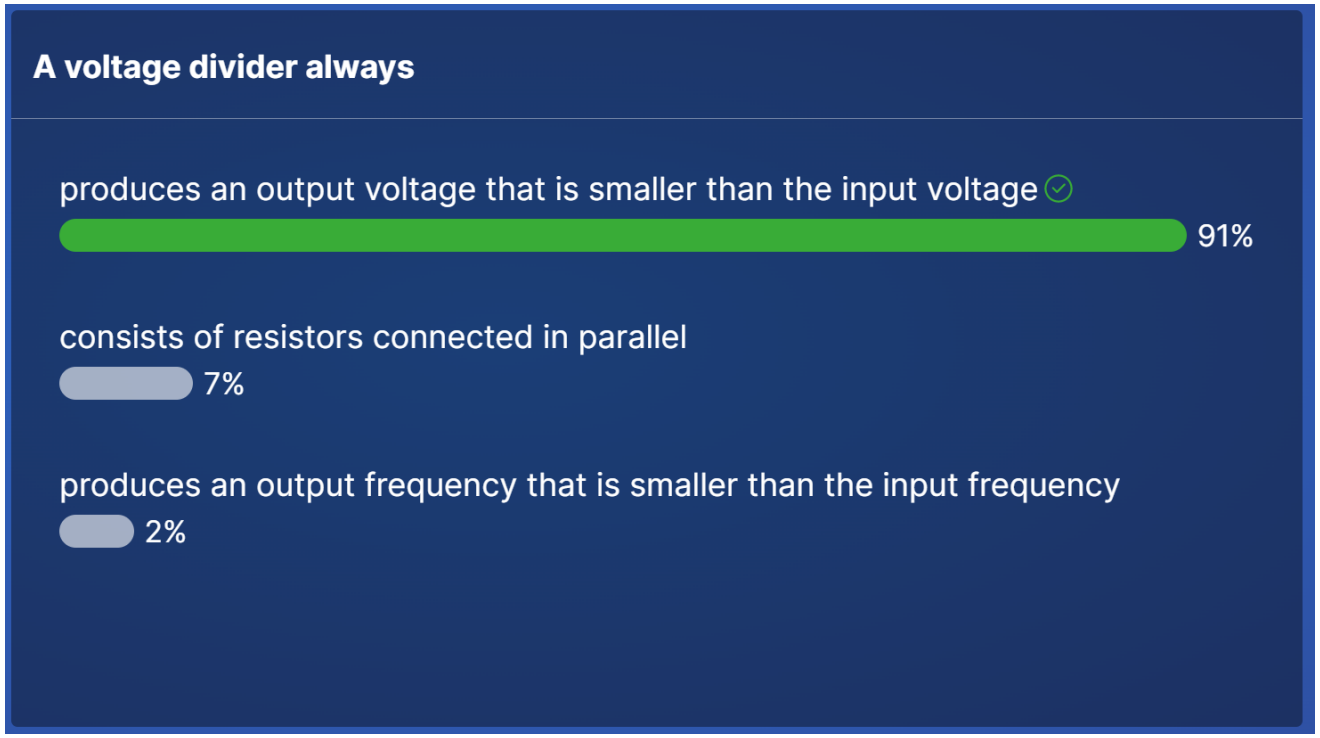


The answer here is **neither** because:

1) In order for resistors to be in series, they must *be connected to each other at one of their ends, with no other elements connected there.* Since *three* elements are connected at a single node, these resistors are **NOT** in series.

2) In order for resistors to be in parallel, they must *be connected at both ends, so that they form a loop consisting of only two elements.* Since none of these resistors are connected to any of the other resistors at both ends, these resistors are **NOT** in parallel either.

Q2) Function of a Voltage Divider



According to Kirchoff's Voltage law, the total voltage drop across all elements in a circuit loop is zero, stated alternatively, that means that none of the elements that have a voltage drop across them can have a voltage larger than the source voltage.

Accordingly, the voltage dropped across a resistor that is part of a series of resistors cannot exceed the source voltage and the voltage is given by a ratio of that resistor's resistance to the total series resistance of the circuit, where R_L and R_1 are in series:

$$V_{RL} = \frac{R_L}{R_L + R_1} V_{in}$$