Alright! Let's solve this step-by-step.

You are asked to **calculate the equivalent resistance** for the circuit shown.

From the circuit:

- $R_1 = 1, k\Omega$
- $R_2 = 390, \Omega$
- $R_3 = 150, \Omega$
- $R_4 = 260, \Omega$
- $R_5 = 1000, \Omega$
- $R_6 = 220, \Omega$
- $R_7 = 390, \Omega$
- $R_8 = 150, \Omega$
- $R_9 = 100, \Omega$
- $R_{10} = 260, \Omega$

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Now, observe how resistors are connected:

- R_1 is in series with the rest of the network.
- R_2 is parallel with the combination of others.

The big parallel network includes:

- Top branch: R_3 'n R_4 'n R_5 (series connection)
- Bottom branch: R_6 'n R_7 'n R_8 (series connection)
- Both branches are connected together, and R_9 and R_{10} are connected accordingly.

Let's solve it step-by-step:

Step 1: Combine series resistors in the top branch

Top branch:

$$R_{\text{top}} = R_3 + R_4 + R_5$$

R_{\text{top}} = 150,\Omega + 260,\Omega + 1000,\Omega = 1410,\Omega]

Bottom branch:

$$R_{\text{bottom}} = R_6 + R_7 + R_8$$

R_{\text{bottom}} = 220,\Omega + 390,\Omega + 150,\Omega = 760,\Omega]

Step 2: Combine top and bottom branches in parallel

$$\frac{1}{R_{\text{parallel1}}} = \frac{1}{R_{\text{top}}} + \frac{1}{R_{\text{bottom}}}$$

$$\frac{1}{R_{\text{parallel1}}} = \frac{1}{1410} + \frac{1}{760}$$

$$\frac{1}{R_{\text{parallel1}}} = 0.000709 + 0.001316 = 0.002025$$

$$R_{\text{parallel1}} \approx 494\,\Omega$$

Step 3: Combine R_9 and R_{10} (series)

$$R_9 + R_{10} = 100\,\Omega + 260\,\Omega = 360\,\Omega$$

Step 4: Combine previous results (parallel again)

Now $R_{\text{parallel1}}$ is in parallel with $(R_9 + R_{10})$.

$$\frac{1}{R_{\text{parallel2}}} = \frac{1}{494} + \frac{1}{360}$$

$$\frac{1}{R_{\text{parallel2}}} = 0.002024 + 0.002778 = 0.004802$$

$$R_{\text{parallel2}} \approx 208.2\,\Omega$$

Step 5: Now, R_2 is in parallel with $R_{\text{parallel2}}$

$$\frac{1}{R_{\text{parallel3}}} = \frac{1}{390} + \frac{1}{208.2}$$

$$\frac{1}{R_{\text{parallel3}}} = 0.002564 + 0.004803 = 0.007367$$

$$R_{\text{parallel3}} \approx 135.7\,\Omega$$

Step 6: Finally, $R_{\text{parallel3}}$ is in series with R_1

Thus:

$$R_{\text{eq}} = R_1 + R_{\text{parallel3}}$$

R_{\text{eq}} = 1000,\Omega + 135.7,\Omega]

$$R_{\text{eq}} \approx 1135.7\,\Omega$$

with R_1

Thus:

$$R_{\text{eq}} = R_1 + R_{\text{parallel3}}$$

R_{\text{eq}} = 1000,\Omega + 135.7,\Omega]

$$R_{\text{eq}} \approx 1135.7\,\Omega$$

Final Answer:

$$\boxed{R_{\text{eq}} \approx 1136\,\Omega}$$
