Ex:

Calculate $v_1$.

\text{sol'n: The lower left $12\,k\Omega$ and $24\,k\Omega$ } R's \text{ are in parallel. The upper right wire and } 24\,k\Omega \text{ are in parallel, as well.}

\[ 12\,k\Omega \parallel 24\,k\Omega = 12\,k\Omega \cdot \frac{1}{2} = 6\,k\Omega \]

\[ 0\,\Omega \parallel 24\,k\Omega = 0\,\Omega \text{ (wire)} \]

\text{circuit:}

We see that the $10\,k\Omega$ is in parallel with the $15\,k\Omega$.

\[ 10\,k\Omega \parallel 15\,k\Omega = 5\,k\Omega \cdot \frac{2}{3} = 5\,k\Omega \cdot \frac{6}{5} = 6\,k\Omega \]
We have two separate circuits across the 2.1V source: one circuit is the 2.5 mA source, and the other circuit is all the Rs. We may solve these circuits separately, meaning we may ignore the 2.1V source.

circuit for finding $V_1$:

```
    +
 2.1V ----+
    |     |
    | 8kΩ  |
    |     |
    + 6kΩ |
       |
     + V_1
```

This is a $V$-divider:

$$V_1 = 2.1V \cdot \frac{6kΩ}{6kΩ + 8kΩ} = \frac{2.1V \cdot 6}{14} = 2.1V \left(\frac{3}{7}\right)$$

or

$$V_1 = 0.9V$$