

Lightbulb $3,5V$
 $2A$
 $R = ? \Omega$

$$R = \frac{V}{I}$$

$$= \frac{3,5}{2}$$

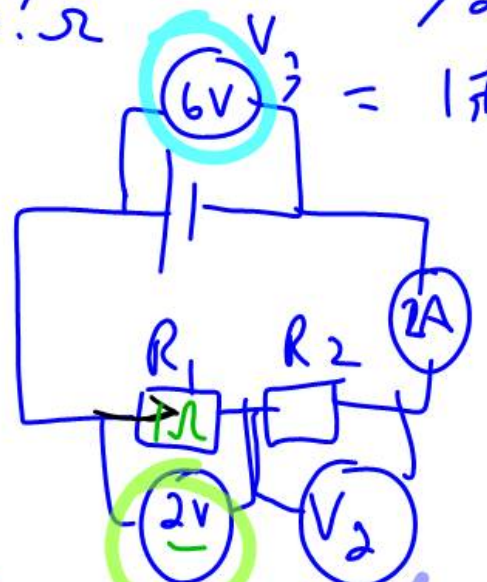
$$= 1,75 \Omega$$

$$R_1 =$$

$$V = I R$$

$$V \propto R$$

19-02-2013
 Gr 9 Tut



$$R_1 = \frac{V}{I}$$

$$= \frac{2V}{2A}$$

$$= 1 \Omega$$

Present:

Jo Piagalis

$$V_2 = 6V - 2V$$

$$= 4V$$

$$R_2 = \frac{V}{I} = \frac{4}{2}$$

$$= 2 \Omega$$

Only in series

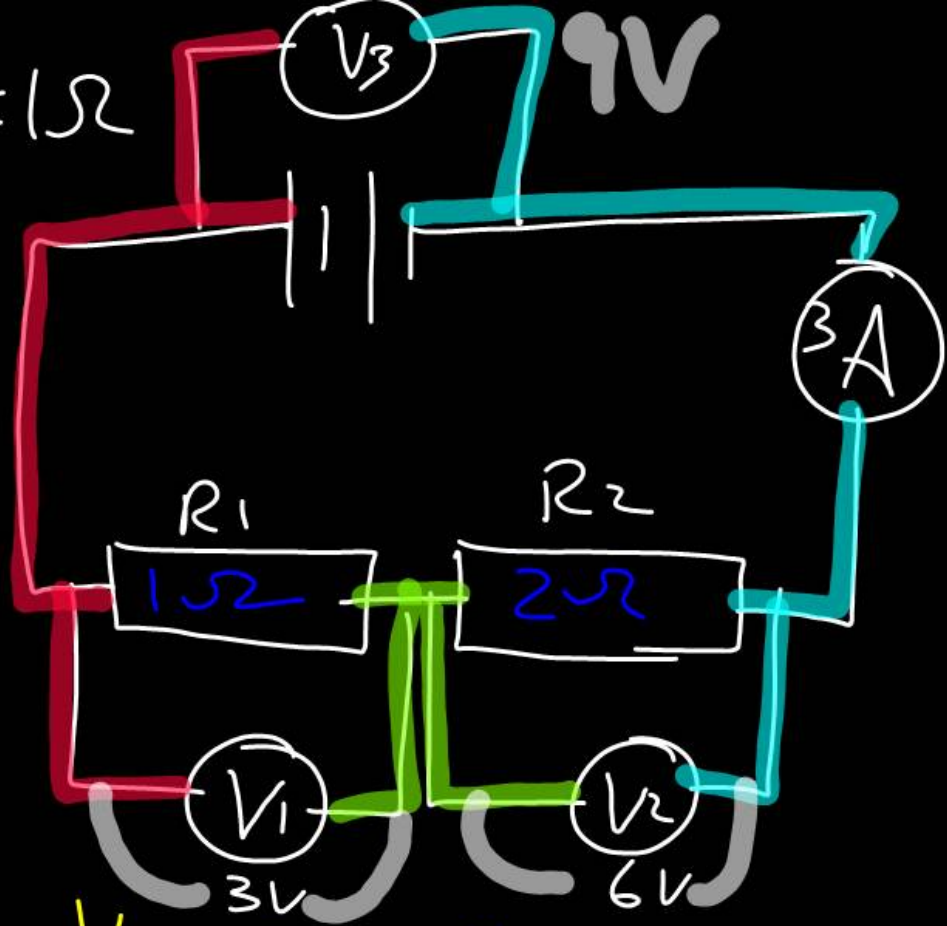
$V_1: 2V$
 $V_2: 4V$
 $R_1: 1 \Omega$
 $R_2: 2 \Omega$

Resistors in series are potential d.f. dividers.

$$R_1 = \frac{V}{I} = \frac{3}{3} = 1\Omega$$

$$R_2 = \frac{4}{3} = 2\Omega$$

V_3

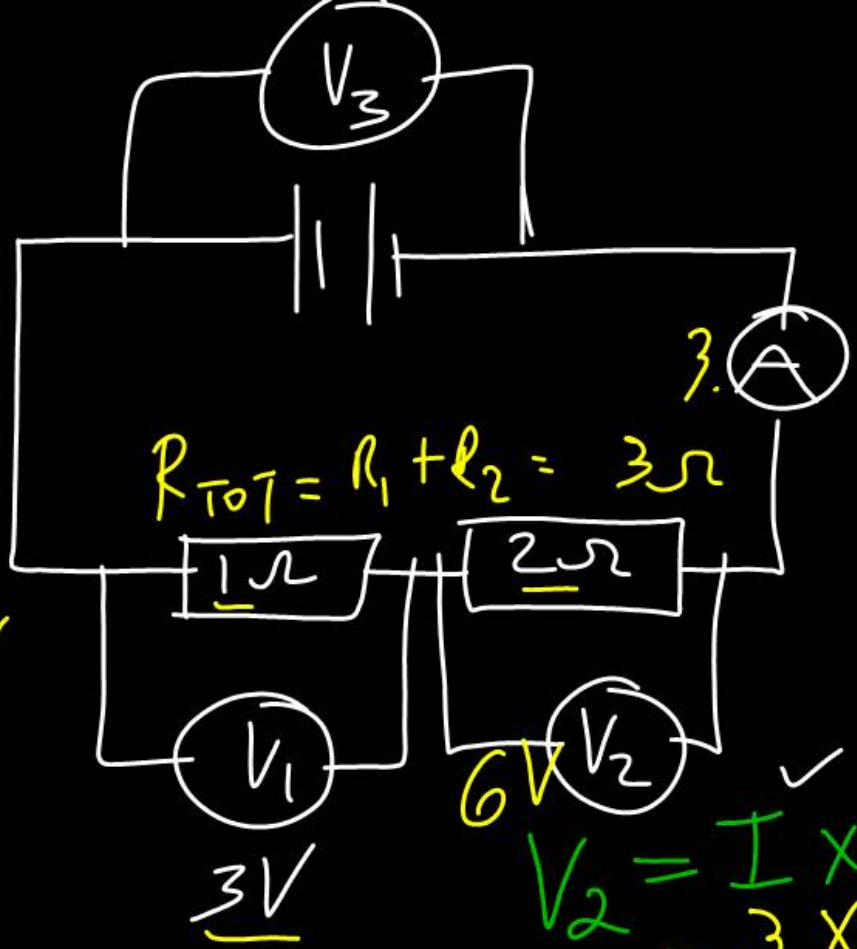


$$\begin{aligned} V_3 &= V_1 + V_2 \\ &= 3 + 6 = 9V \end{aligned}$$

3)
i) $I = 3A$

ii) $V_2 = 6V$

iii) $V_3 = 9V$

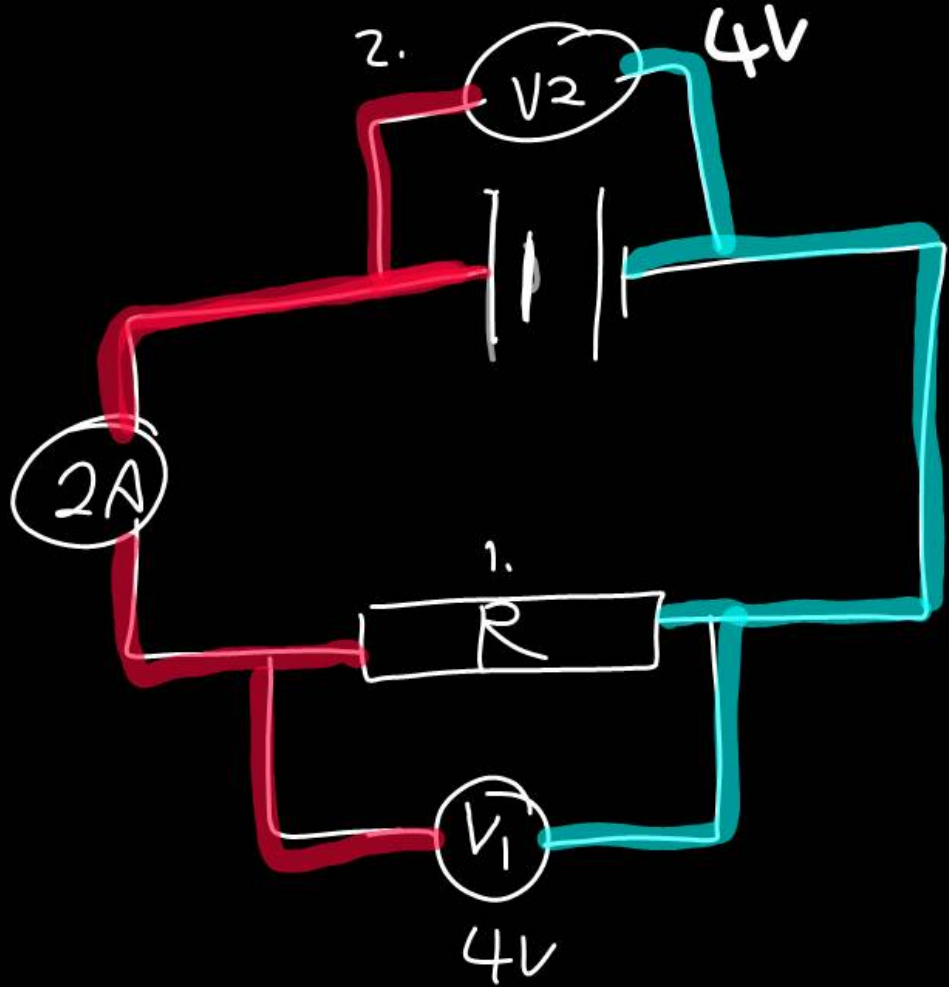


$R_{TOT} = R_1 + R_2 = 3\Omega$

$V_2 = I \times R$
 $= 3 \times 2$
 $= 6V$

$R = \frac{V}{I}$
 $I = \frac{V}{R}$ (start with resistor with most info)
 $= \frac{3}{1}$
 $= \underline{3A}$

$V_3 = I_{TOT} \times R_{TOT}$
 $= 3 \times 3$
 $= \underline{9V}$



$$R = \frac{V}{I}$$
$$= \frac{4}{2}$$
$$= \underline{2\Omega} \quad \checkmark$$

$$V_2 = 4V$$