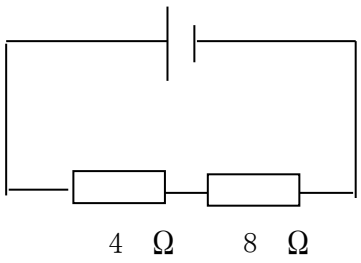
回路全体の抵抗

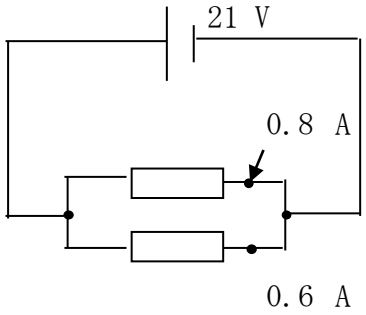
NO.2　　名前　　／８　点

◆ 次の回路全体の抵抗の大きさを答えなさい。

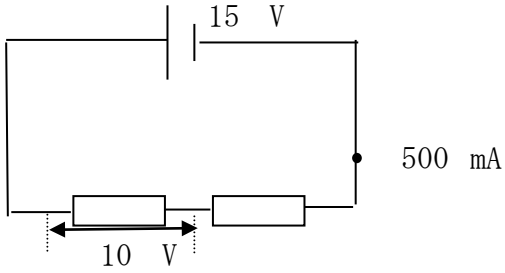
①



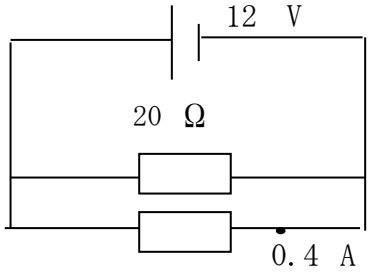
②



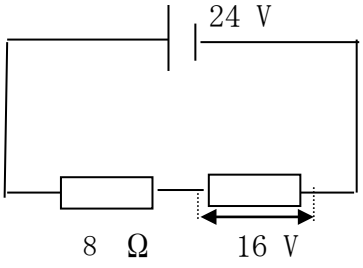
③



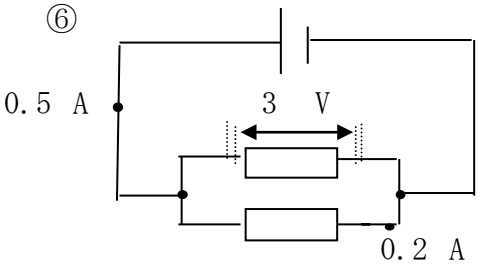
④



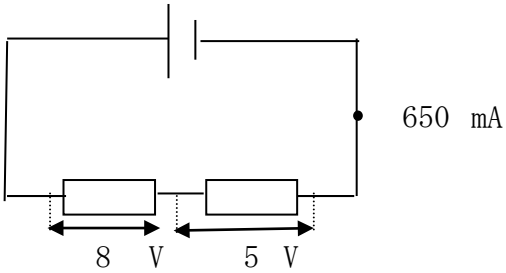
⑤



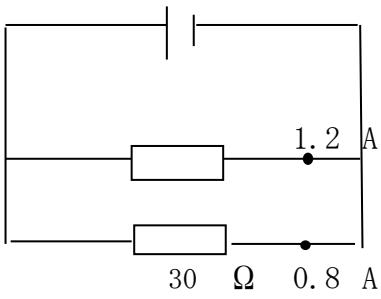
⑥



⑦



⑧



解答

① 4 ＋ 8 ＝ 12 Ω

② 21 ÷ (0.8 ＋ 0.6) ＝ 15 Ω

③ 15 ÷ 0.5 ＝ 30 Ω

④ 12 ÷ 20 ＝ 0.6 A ←上の抵抗に流れる電流

0.4 ＋ 0.6 ＝ 1 A ←全体の電流

12 ÷ 1 ＝ 12 Ω

⑤ 24 － 16 ＝ 8 V

8 ÷ 8 ＝ 1 A ←回路全体の電流

24 ÷ 1 ＝ 24 Ω

⑥ 3 ÷ 0.5 ＝ 6 Ω

⑦ 8 ＋ 5 ＝ 13 V ←全体の電圧

13 ÷ 0.65 ＝ 20 Ω

⑧ 0.8 × 30 ＝ 24 V ←全体の電圧

1.2 ＋ 0.8 ＝ 2 A ←全体の電流

24 ÷ 2 ＝ 12 Ω