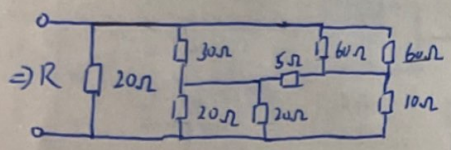
① 求入端电阻 R. 2-2



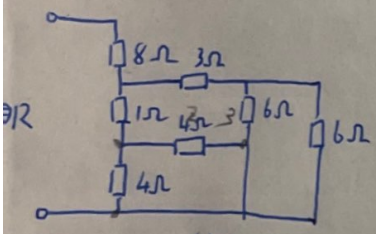
(a)

将两个20Ω的电阻并联和将两个60Ω的电阻并联后，易得图中存在电桥平衡：

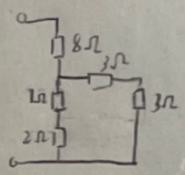
$[(20\parallel 20+30)\parallel(60\parallel 60+10)]\parallel 20$

$=(40\parallel 40)\parallel 20$

$=10\Omega$



(b)

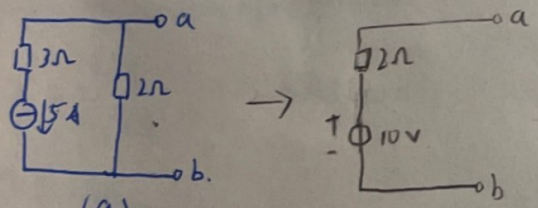


$[(3+3)\parallel(1+2)]+8$

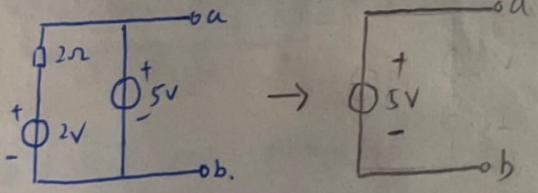
$=2+8$

$=10\Omega$.

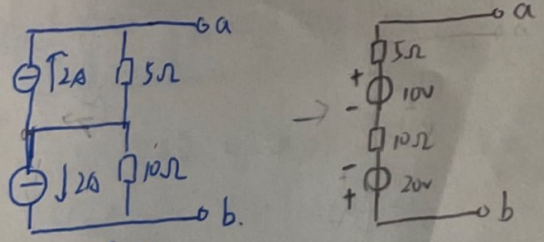
② 2-6 化成最简单形式



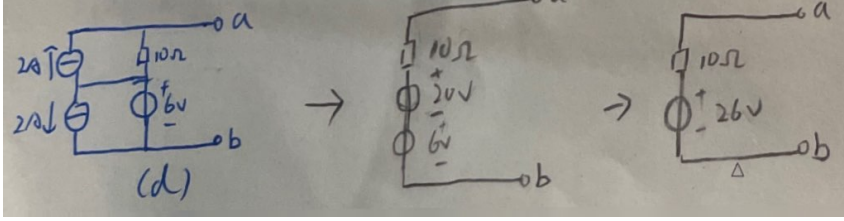
(a)



(b)



(c)



(d)

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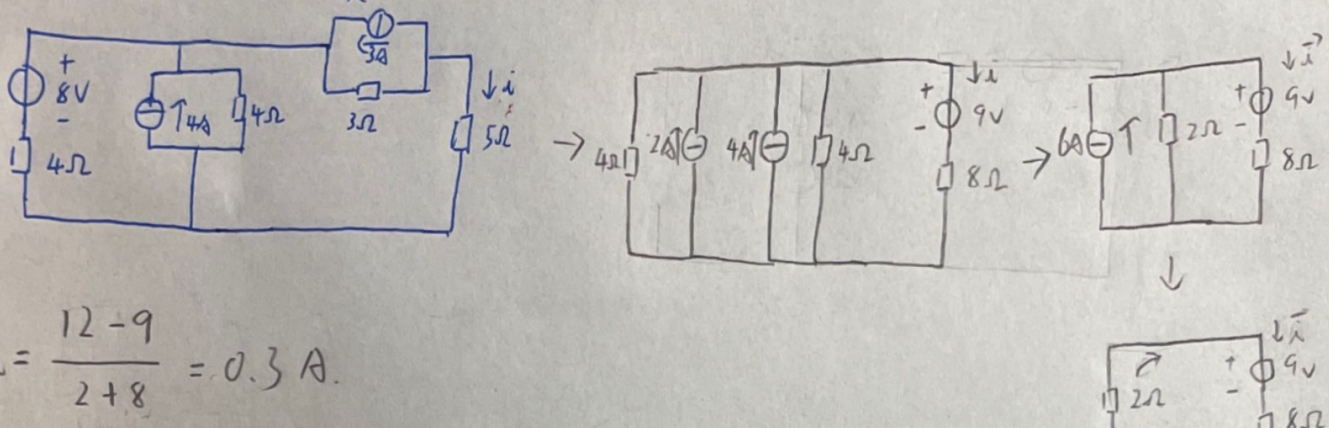
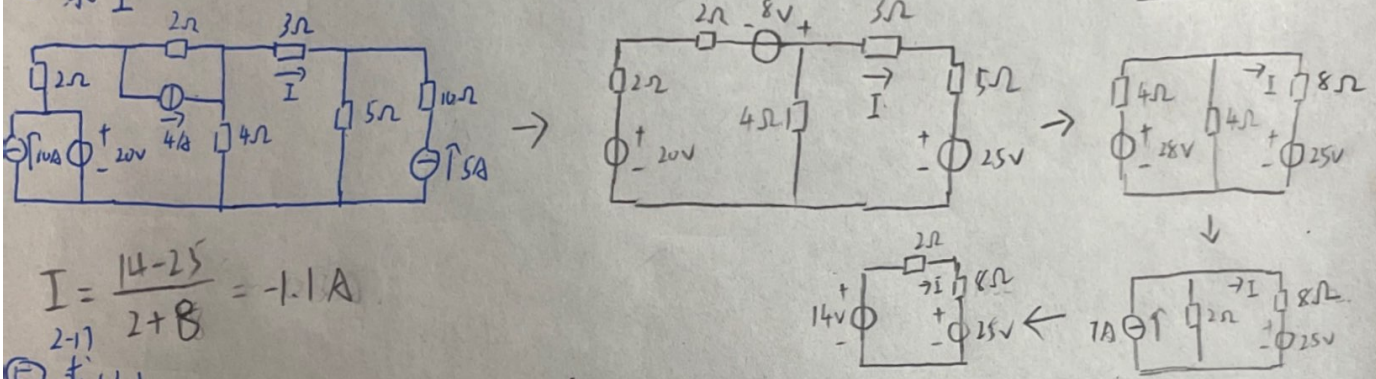
③ 2-8 试用电源等效变换法求 i



$$i=\frac{12-9}{2+8}=0.3\ A.$$

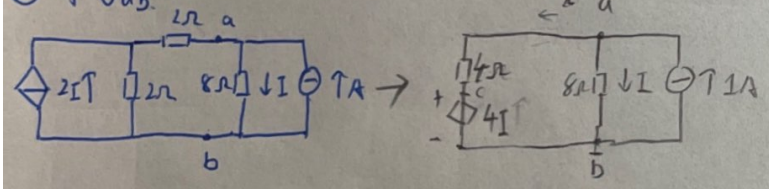
④ 求 I



$$I=\frac{14-25}{2+8}=-1.1\ A$$

2-17

⑤ 求 U_{ab}



$U_{ab}=8I\ V$

$U_R=8I-4I=4I\ V.$

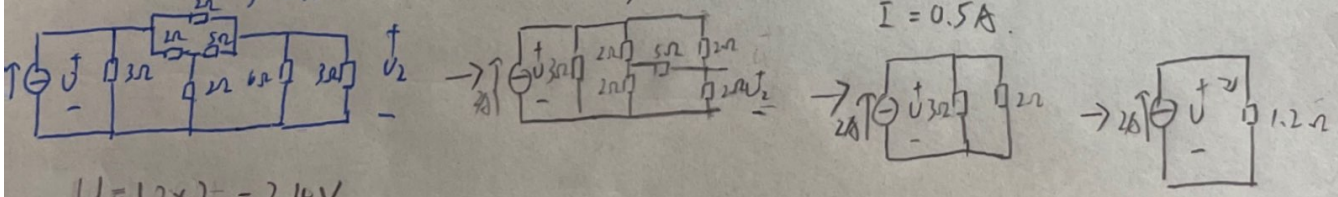
$i=\frac{4I}{4}=I$

$I+I=1$

$I=0.5A.$

$U_{ab}=8\times0.5=4V$

⑥ 2-22. 求 U, U_2，电源发出功率



$U=1.2\times2=2.4V$

$U_2=\frac{2}{2+2}U=1.2V$

$P_{发}=iu=2\times2.4=4.8W$