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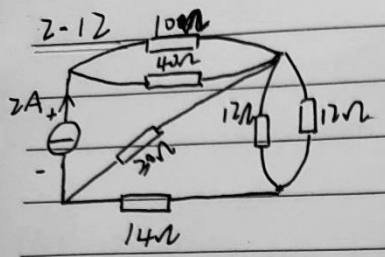
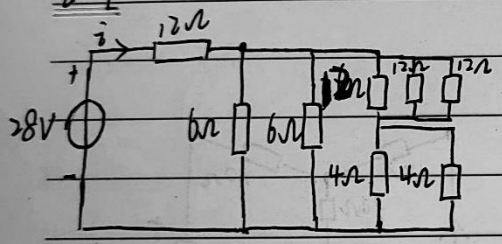
2-12



$Req = 8\Omega + 12\Omega = 20\Omega$

$U = IReq = 40V$

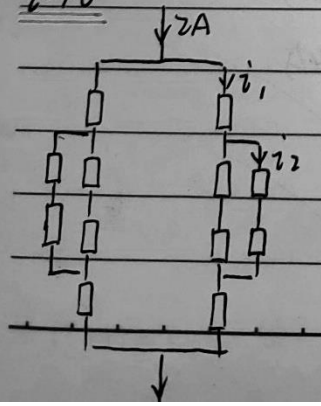
2-14



$Req = 2\Omega + 12\Omega = 14\Omega$

$i = \frac{U}{Req} = 2A$

2-16



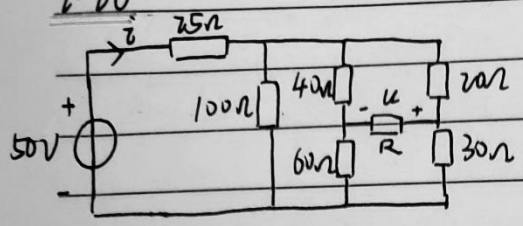
$Req = 30\Omega$

$U = iReq = 60V$

$i_1 = \frac{1}{2}i = 1A$

$i_2 = \frac{1}{2}i_1 = 0.5A$

2-20



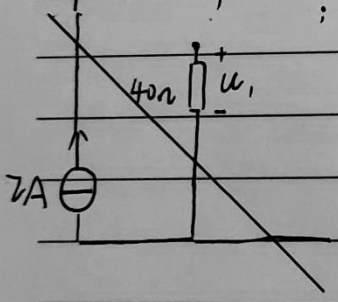
电桥平衡 $u=0$

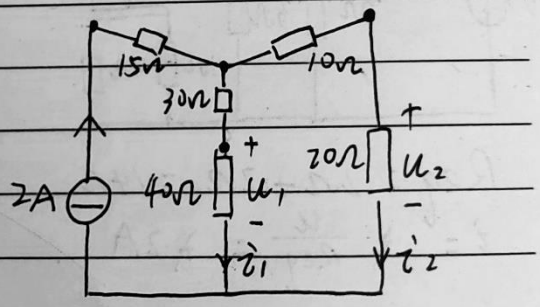
$R_{eq}=50\Omega$

~~$i=-1A$~~ $i=1A$

2-24

作△→Y的变换：





$i_1=2\times\frac{30}{70+30}A=0.6A$

$i_2=2\times\frac{70}{70+30}A=1.4A$

$u_1=i_1R_1=24V$

$u_2=i_2R_2=28V$

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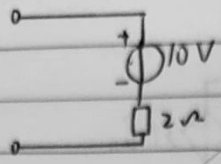
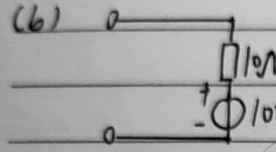
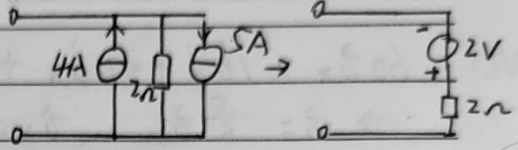
2-26 (a)



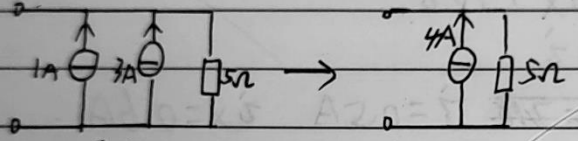
(b)



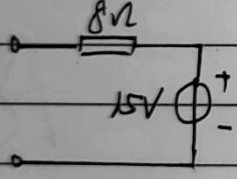
(c)



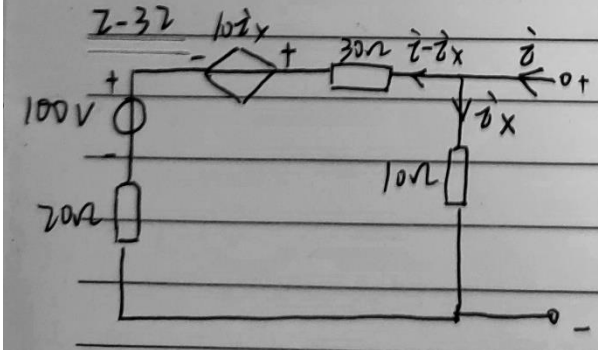
(d)



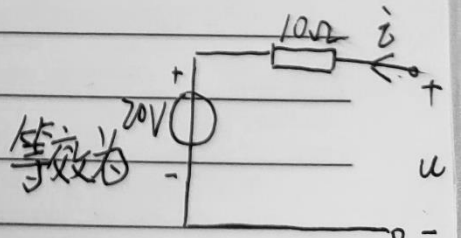
(e)



2-32



等效为



$u=10i_x=(30+20)(i-i_x)+100+10i_x$

$\therefore i=2-i_x=2$

$\therefore u=10i_x=10\times2=20$

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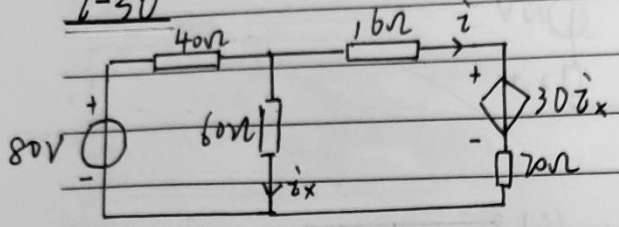
2-36



KVL: $60i_x = 16i + 30i_x + 20i$

$\Rightarrow i = \frac{5}{6} i_x \quad i_x = \frac{6}{5} i$

KVL: $80 = 40(i_x + i) + 60i_x$

$= 100 i_x + 40 i$

$= 160 i$

$i = 0.5A \quad i_x = 0.6A$