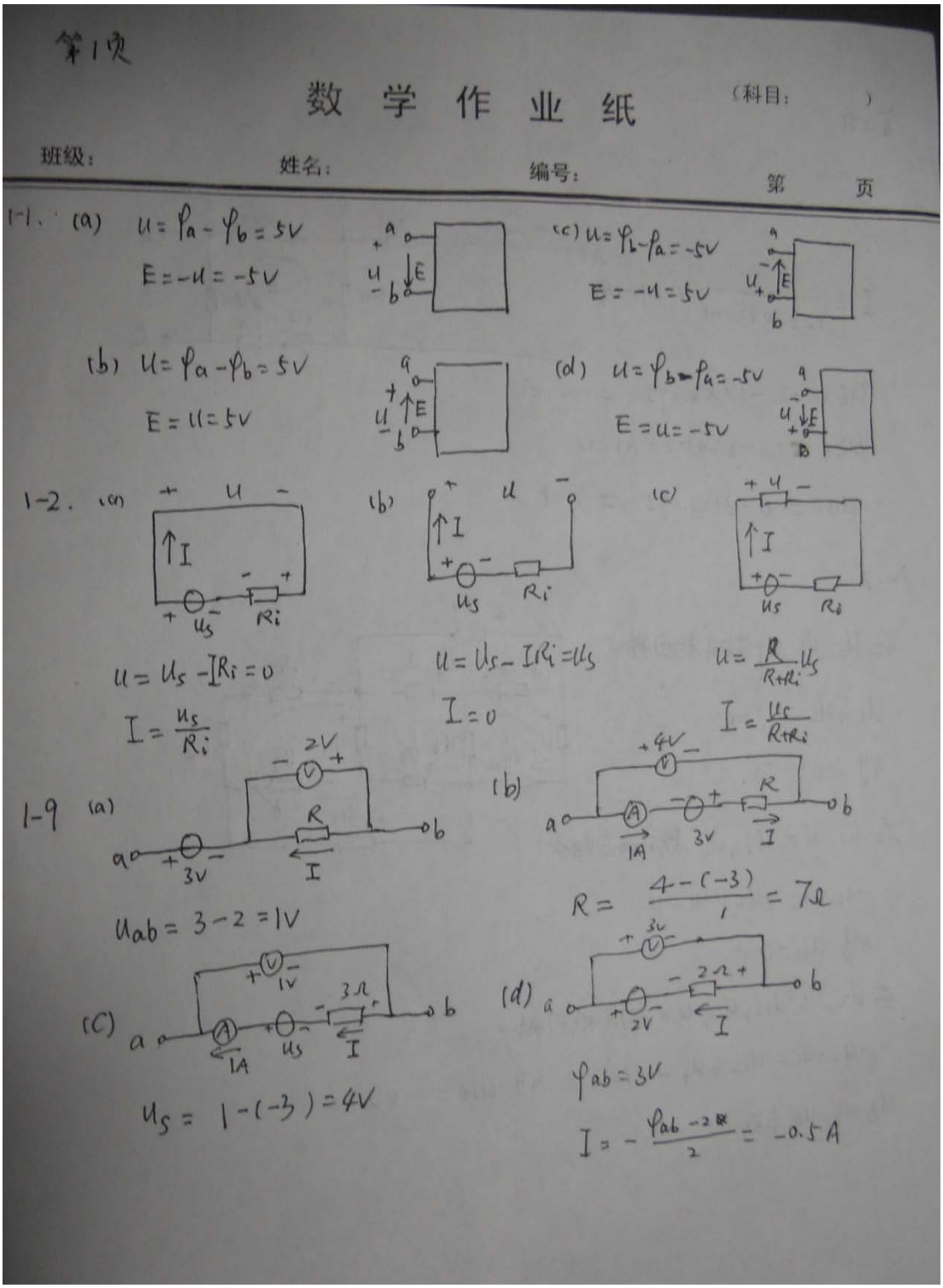
第一次作业参考答案：


第1次
数学作业纸
（科目：）
班级：
姓名：
编号：
第 页
1-1. (a) U = φa - φb = 5V
E = -U = -5V
(b) U = φa - φb = 5V
E = U = 5V
(c) U = φb - φa = -5V
E = -U = 5V
(d) U = φb - φa = -5V
E = U = -5V
1-2. (a) U = Us - IRi = 0
I = Us/Ri
(b) U = Us - IRi = Us
I = 0
(c) U = R/(R+Ri) Us
I = Us/(R+Ri)
1-9 (a) Uab = 3 - 2 = 1V
(b) R = (4 - (-3))/1 = 7Ω
(c) Us = 1 - (-3) = 4V
(d) φab = 3V
I = -(φab - 2R)/2 = -0.5A

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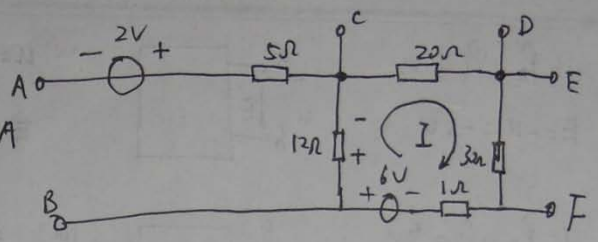
1-11.



$$I = \frac{6}{12+20+30+1} \approx 0.0952A$$

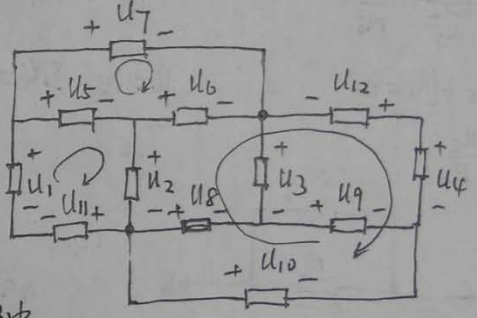
$U_{AB} = -2 - 12 \times 0.0952 = -3.14V$

$U_{BC} = 12 \times 0.0952 = 1.14V$

$U_{BD} = 6 - 31 \times 0.0952 \approx 3.05V$

1-12.

在 U_5, U_6, U_7 构成的回路中：



$U_5 + U_6 - U_7 = 0$

得 $U_5 = -5V$

在 U_1, U_5, U_2, U_{11} 构成的回路中

$-U_1 + U_5 + U_2 + U_{11} = 0$

得 $U_{11} = 10V$

在 $U_2, U_6, U_{12}, U_4, U_{10}$ 构成的回路中

$-U_2 + U_6 - U_{12} + U_4 - U_{10} = 0$ 得 $U_{10} = -1KV$

U_3, U_9, U_8 未知.