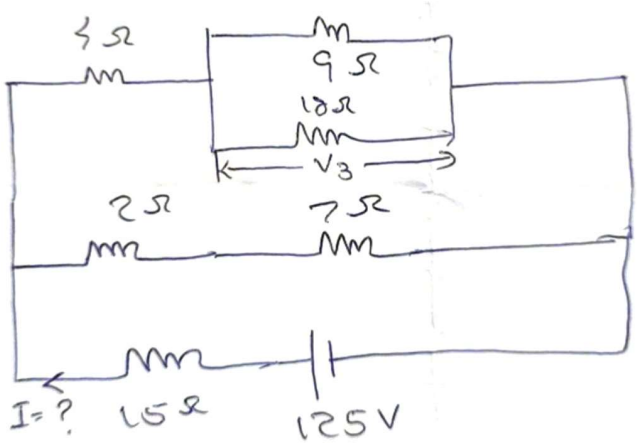
1. Find current supplied by the battery and voltage across 18Ωresistor




```
clc
R1=4+9*18/(9+18);
R2=2+7;
Req=15+R1*R2/(R1+R2);
I=125/Req
```

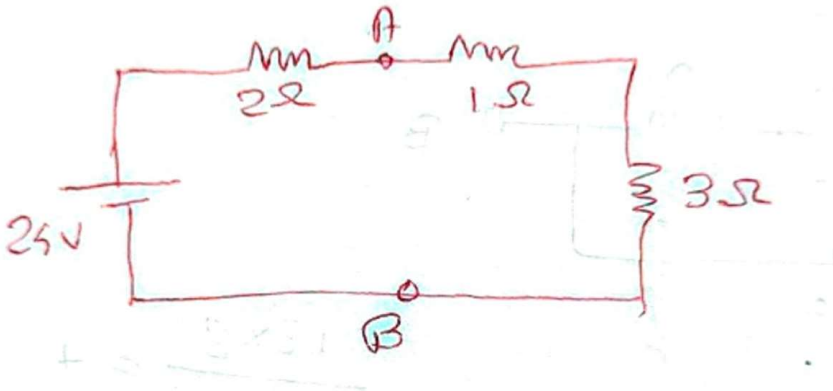
```
I = 6.3333
```

```
I1=I*R2/(R1+R2);
I18=I1*9/(9+18);
V18=I18*18
```

```
V18 = 18
```

(ans:6.33A, 18V)

2. Find voltage between the points

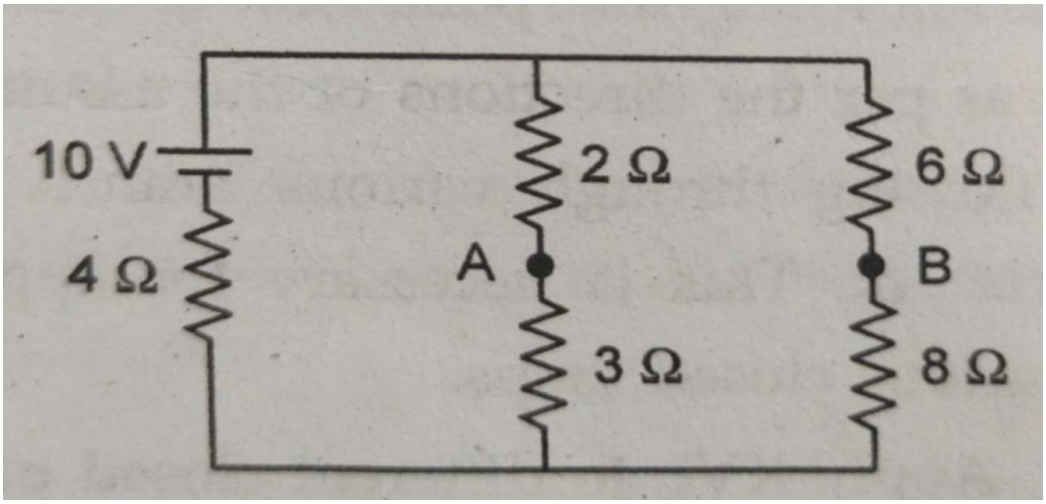


I=24/6=4

Vab-I-3*I=0

Vab=16V

3. Find current in the battery and potential difference across A and B




```
clc
R1=2+3;
R2=6+8;
Req=4+R1*R2/(R1+R2);
I=10/Req
```

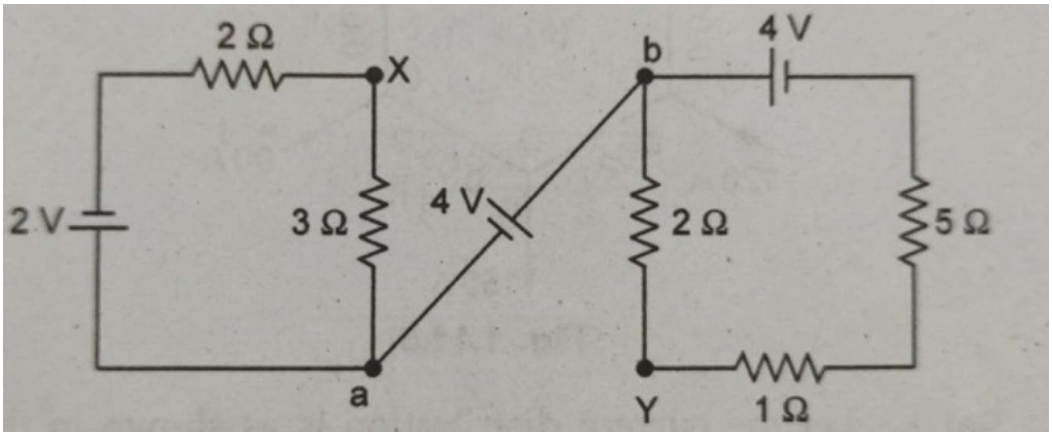
```
I = 1.3014
```

```
I1=I*R2/(R1+R2);
I2=I*R1/(R1+R2);
Vab=6*I2-2*I1
```

```
Vab = 0.1370
```

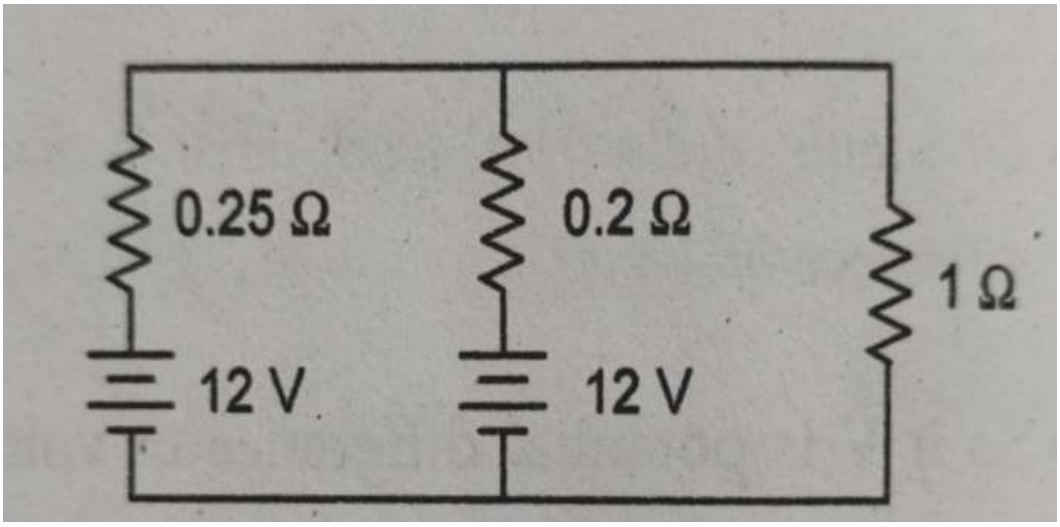
(ans=1.3A, 0.13V)

4. Obtain voltage between points X and Y



ans:-4.2V

5. Find the current supplied by each battery and power dissipated in 1Ωresistor




```
clc
clear all
A=[0.45 -0.2;
    -0.2 1.2];
B=[0;12];
I=inv(A)*B
```

```
I = 2×1
    4.8000
   10.8000
```

```
P=10.8^2*1
```

```
P = 116.6400
```

ans: 4.8A, 6A, 116.64W

6. Find Vbs, Vaq and Vdr