6

6

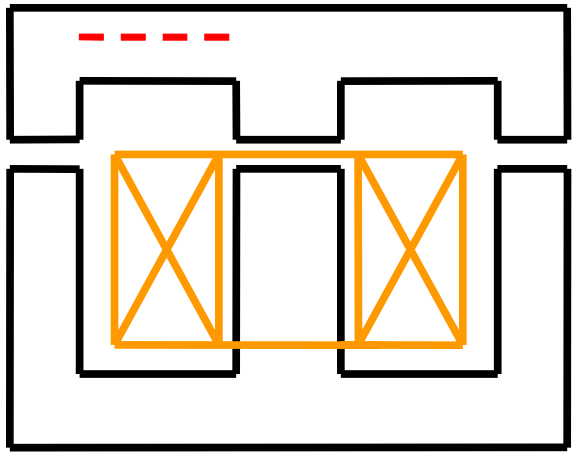
1.

2.

3.

*4.

6.1



6.1.1

1.

B

$$B = \frac{F}{\quad}$$

: **(T)** **1T = 1Wb/** ^{2}

:

2.

/

: [ ](Wb) 1Wb =1T ^{2}

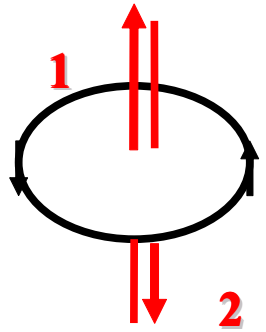
3

/ A/

$$\oint_{\oint H} = \Sigma$$

( )

Σ



=

4.

$$= \qquad / \qquad \mathbf{H/}$$

$$= \frac{}{} = \frac{}{} = \frac{}{}$$

$$_{0} = 4 \times 10^{-7}\,\mathbf{H/}$$

r

0

$$= \frac{}{0} = \frac{}{0} = \frac{}{0}$$

0

6.1.2

1.

>>1 (

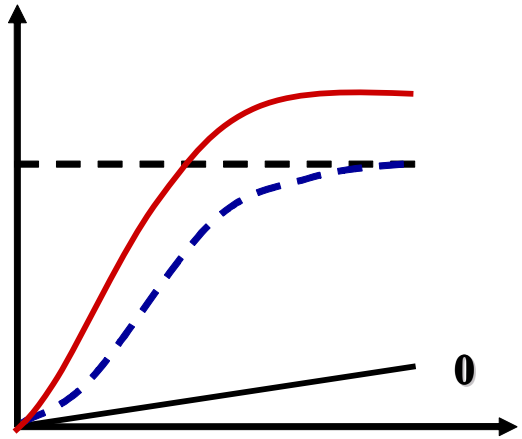
2×10^5)

2.

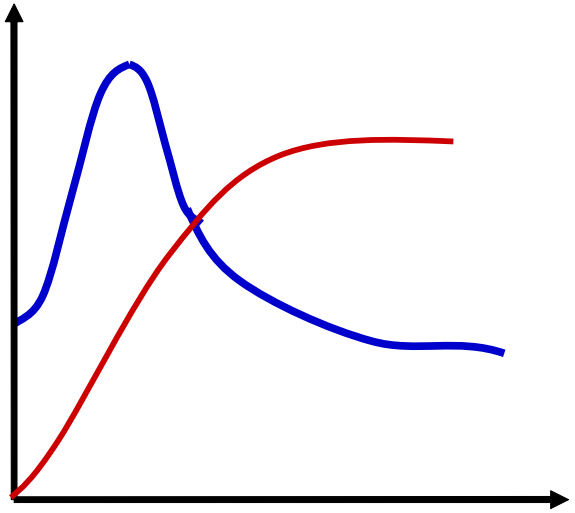
J

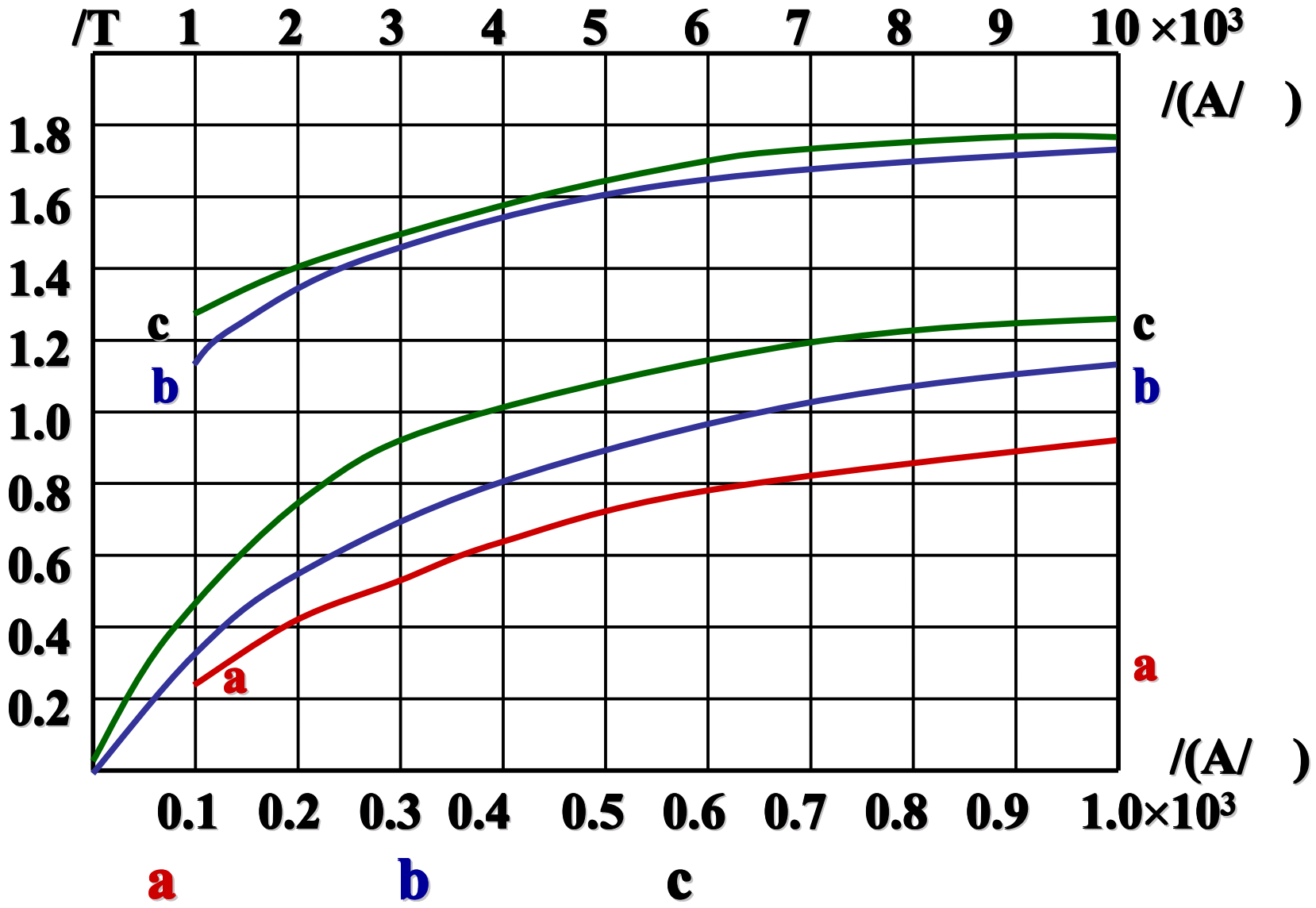
0

J



(Φ)



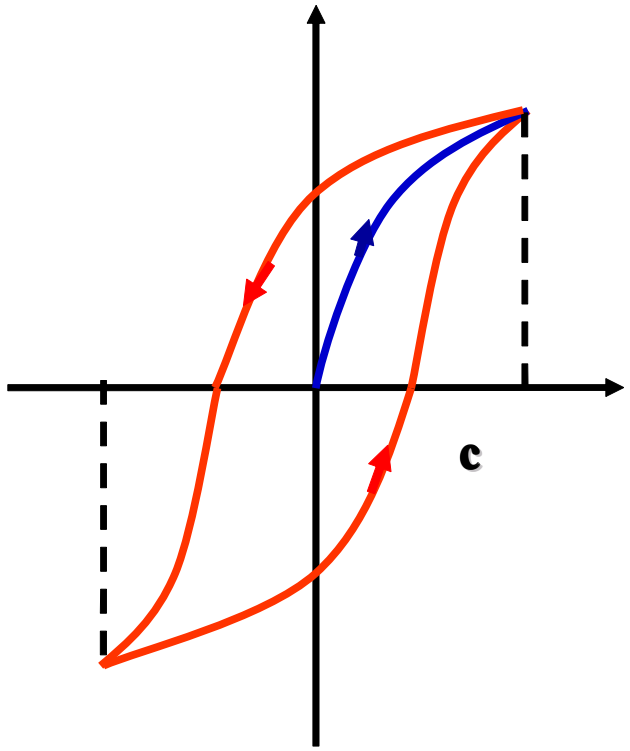

/T
1
2
3
4
5
6
7
8
9
10 ×10³
/(A/)
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
c
b
a
c
b
a
/(A/)
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0×10³
a
b
c

3

-

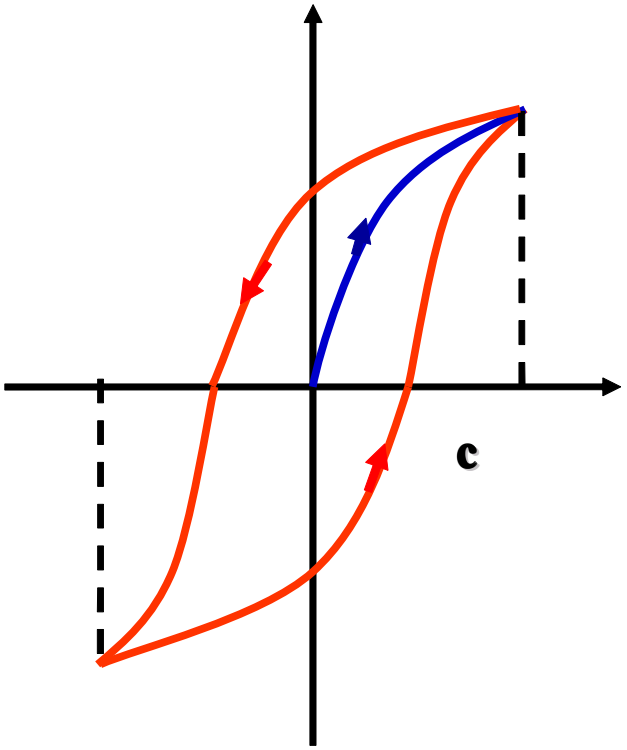
(=0)

:



V

3.



c

= 0

(1)

(2)

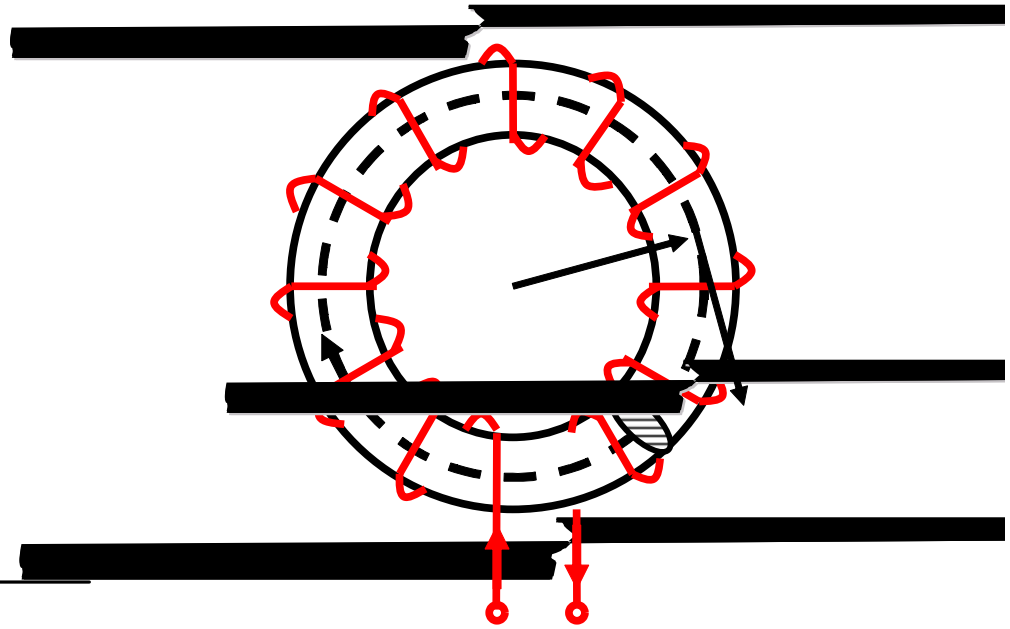
(3)

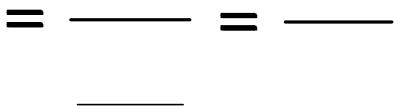
6.1.3

1.

$$\oint \quad = \sum$$

$$= \quad = \frac{\mathbf{B}}{} \quad =$$





2.

3.

:

(

)

,

:

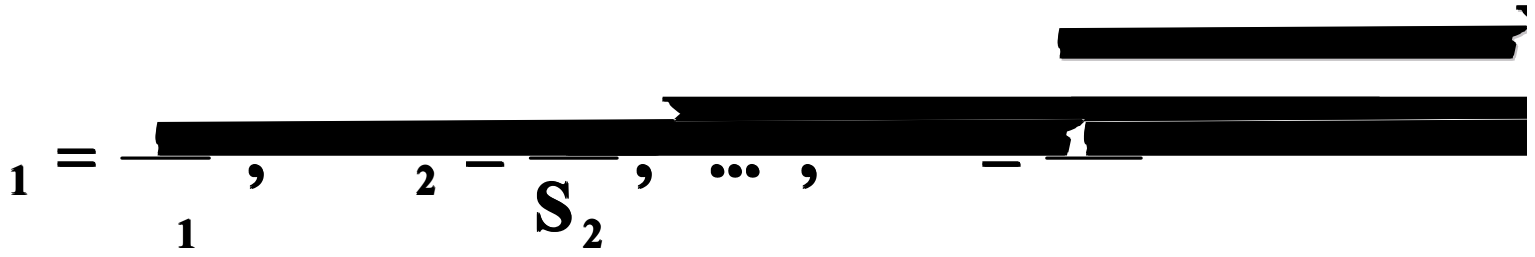
$$= \quad 1 \quad 1 + \quad 2 \quad 2 + \cdots +$$

$$= \sum_{=1}$$

$1 \; 1 \quad 2 \; 2 \cdots$

:

(1)



(2)

( ),

2 1 2

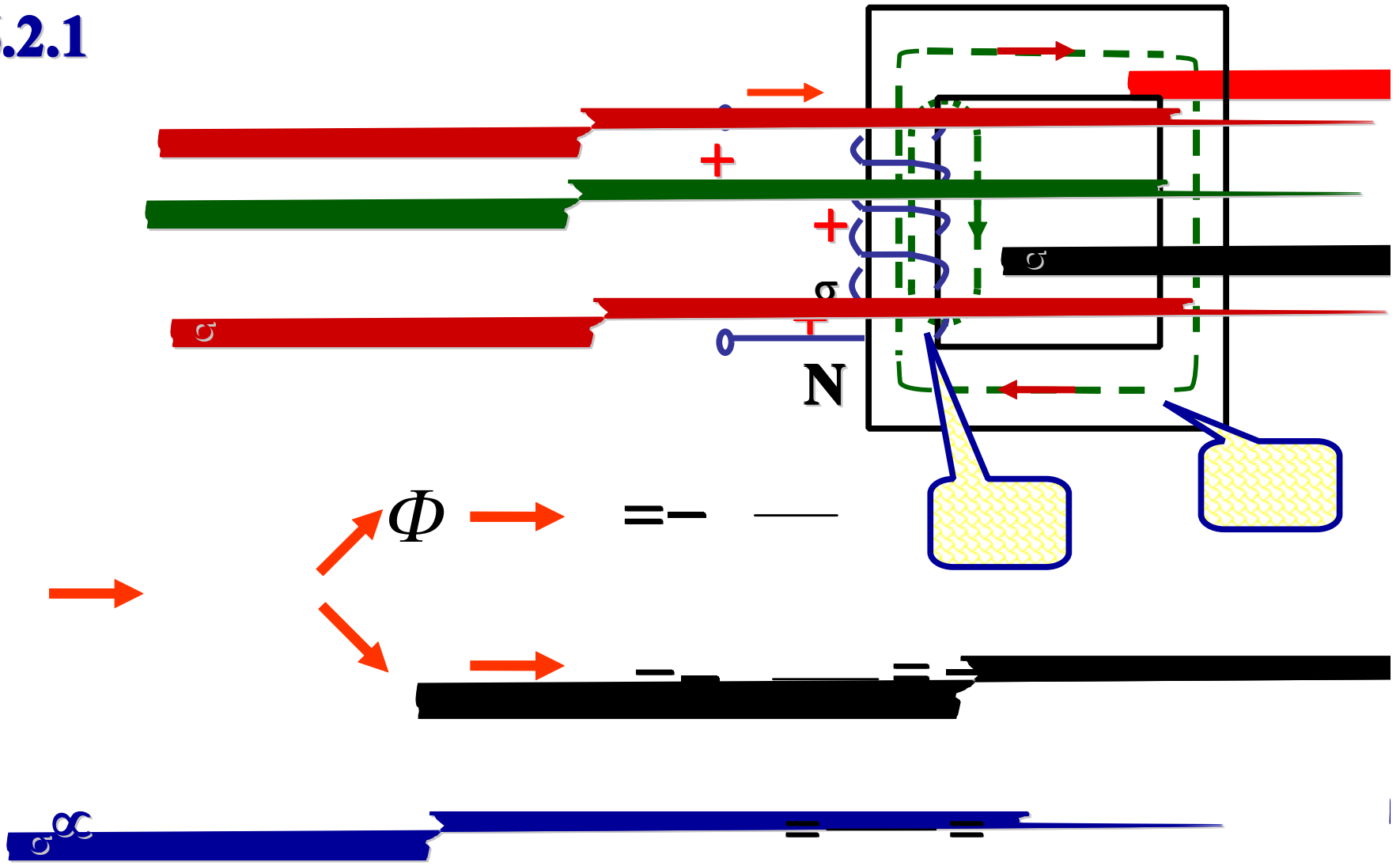
(3)

(4)

$$= \sum_{=1}$$

6.2

6.2.1



6.2.2

KVL:

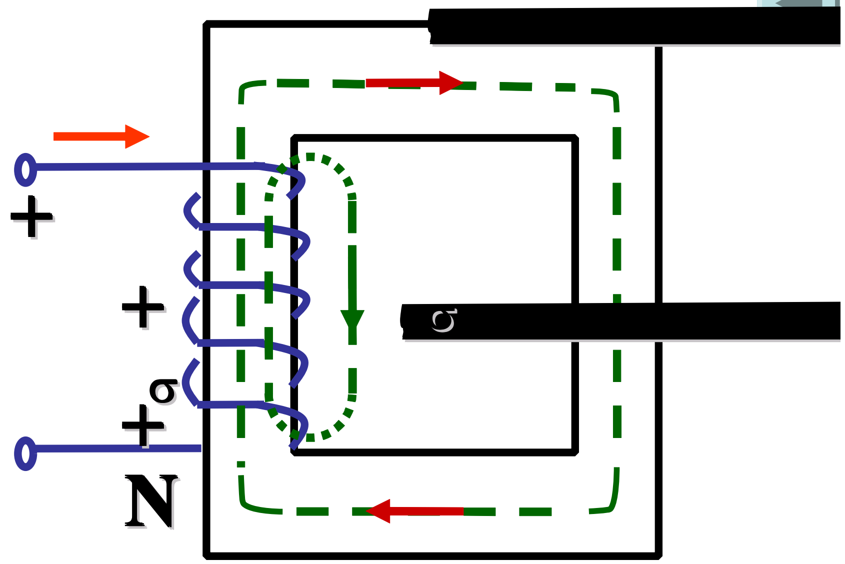
$= \quad - \quad -$

$= \quad + \quad \text{——} + (- \quad)$

σ

$\dot{} = \quad \dot{} + (- \quad \dot{} \quad) + (- \quad \dot{} \quad)$

$= \quad \dot{} + \quad \dot{} + (- \quad \dot{} \quad)$



$$\dot{} = \dot{} + \dot{} + (- \dot{})$$

$$= -$$

$$= 2 \qquad (\quad - 90°) = (\quad 90°)$$

$$= \frac{}{\sqrt{2}} = \frac{2}{\sqrt{2}} - 4\,44$$

σ σ

$$\dot{} \quad \dot{}$$

$$\approx -$$

$$\approx \quad = 4\,44 \qquad = 4\,44 \qquad (V)$$

[T]

[^{2}]

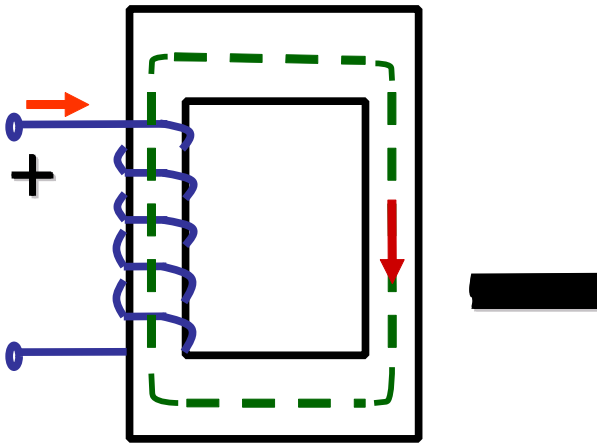
6.2.3

1. **(Δ_c)**

,

Δ_c

$\Delta_c =$ ^{2}

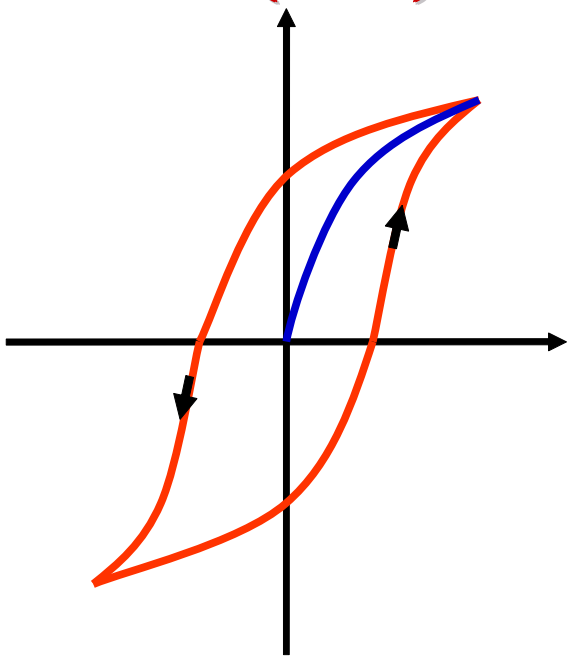


2. **(Δ_F)**

Δ_F

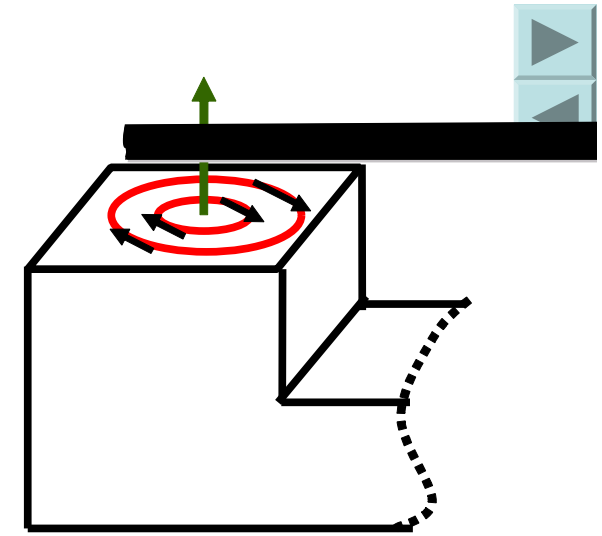
1 Δ

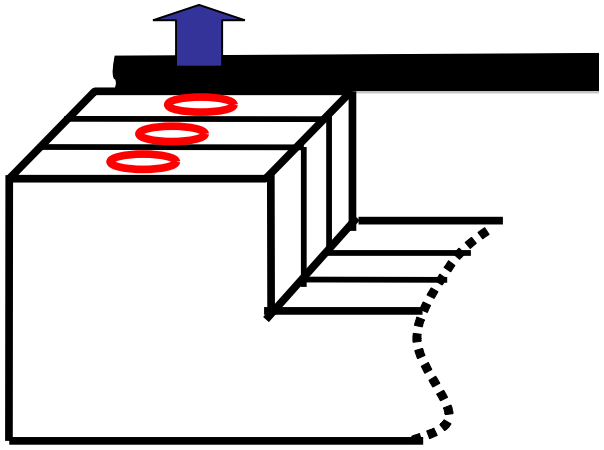
(Δ)



(2) Δ

:





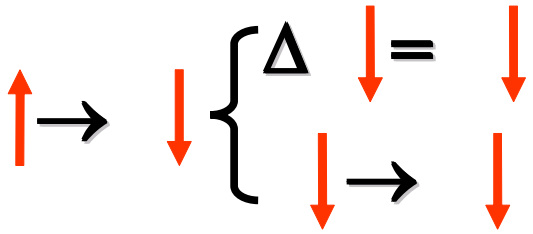
= c = ^{2} + $_{F}$

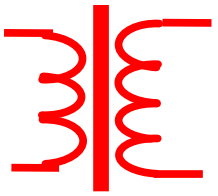
6.3

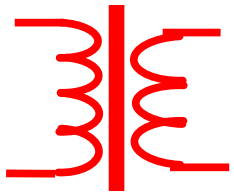
6.3.1

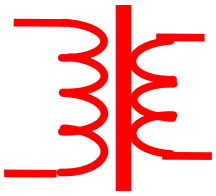
= c

c

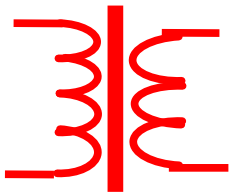


10.5kV  220kV

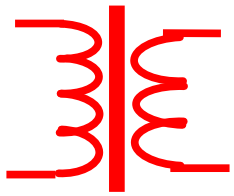


10kV 

…



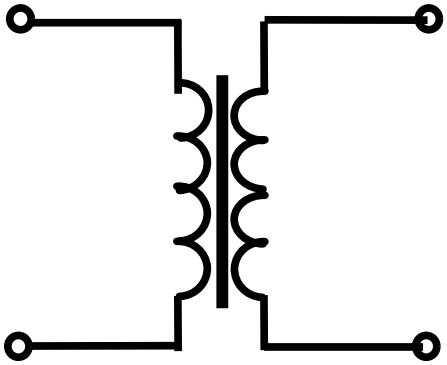
380/220V

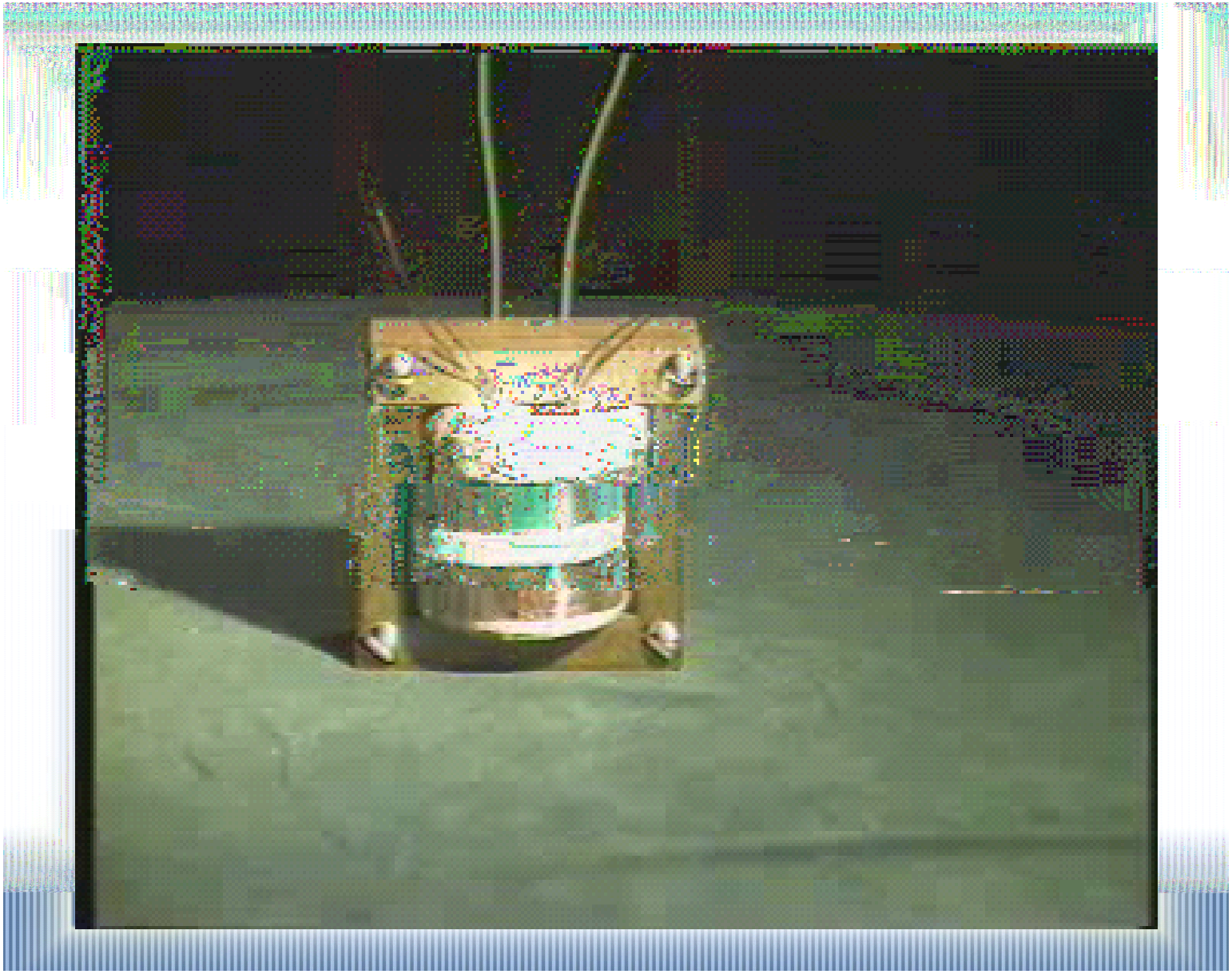


36V

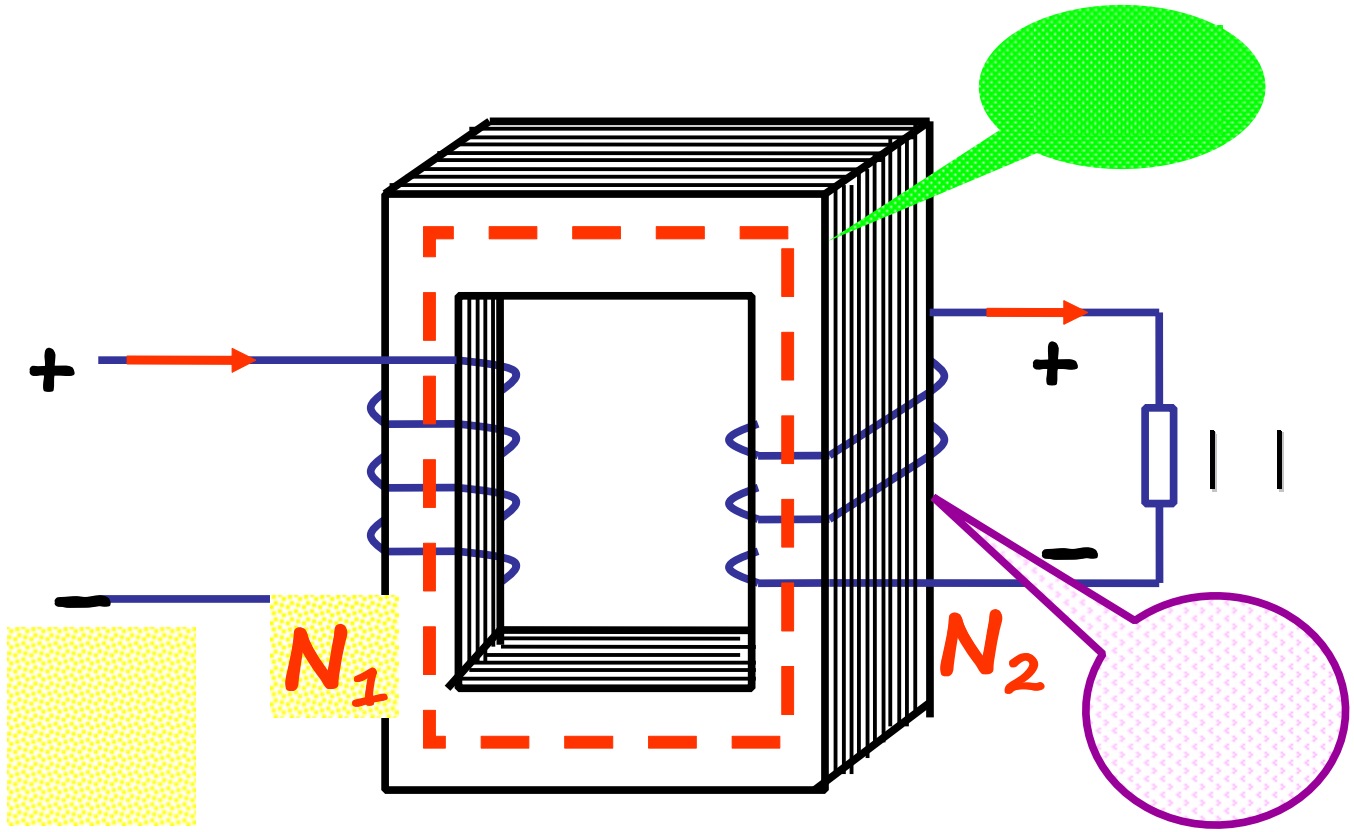
1.

( )



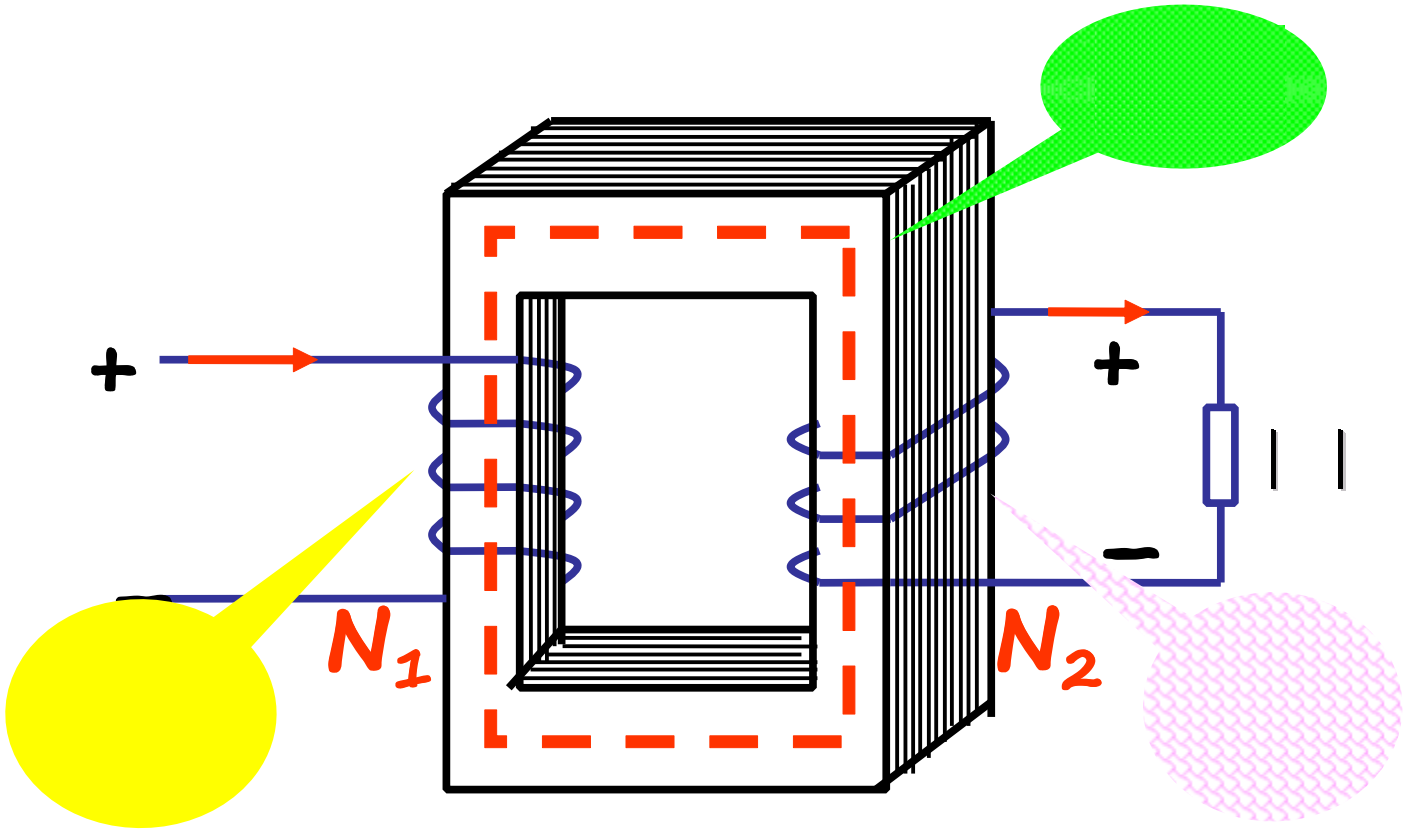


2.



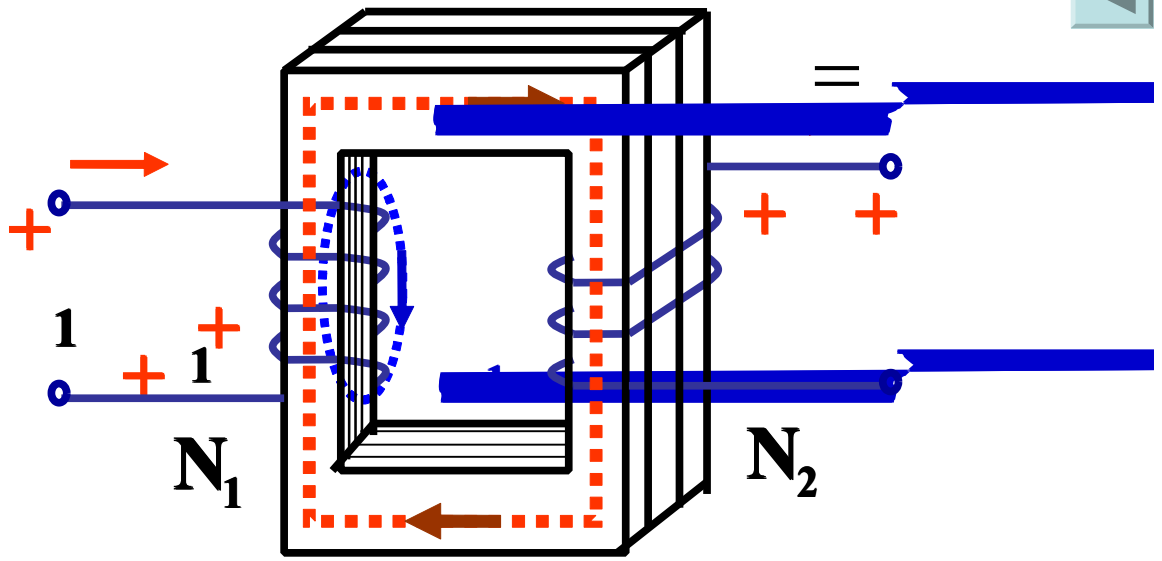
0.35mm 0.5mm

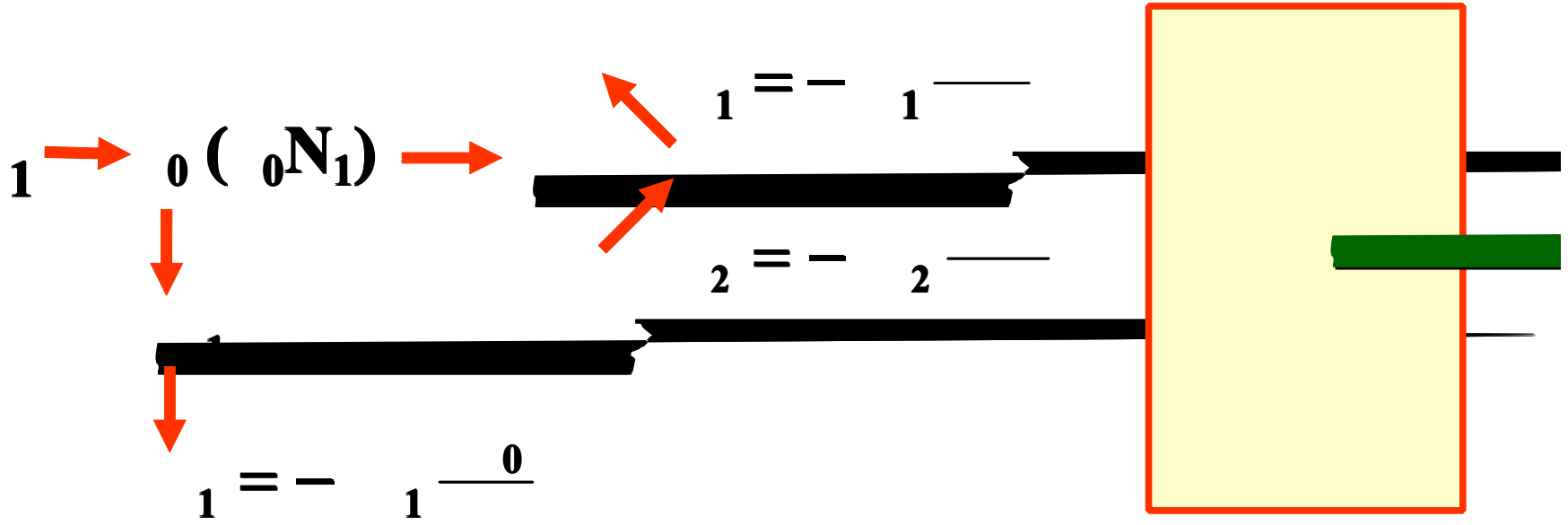
6.3.2



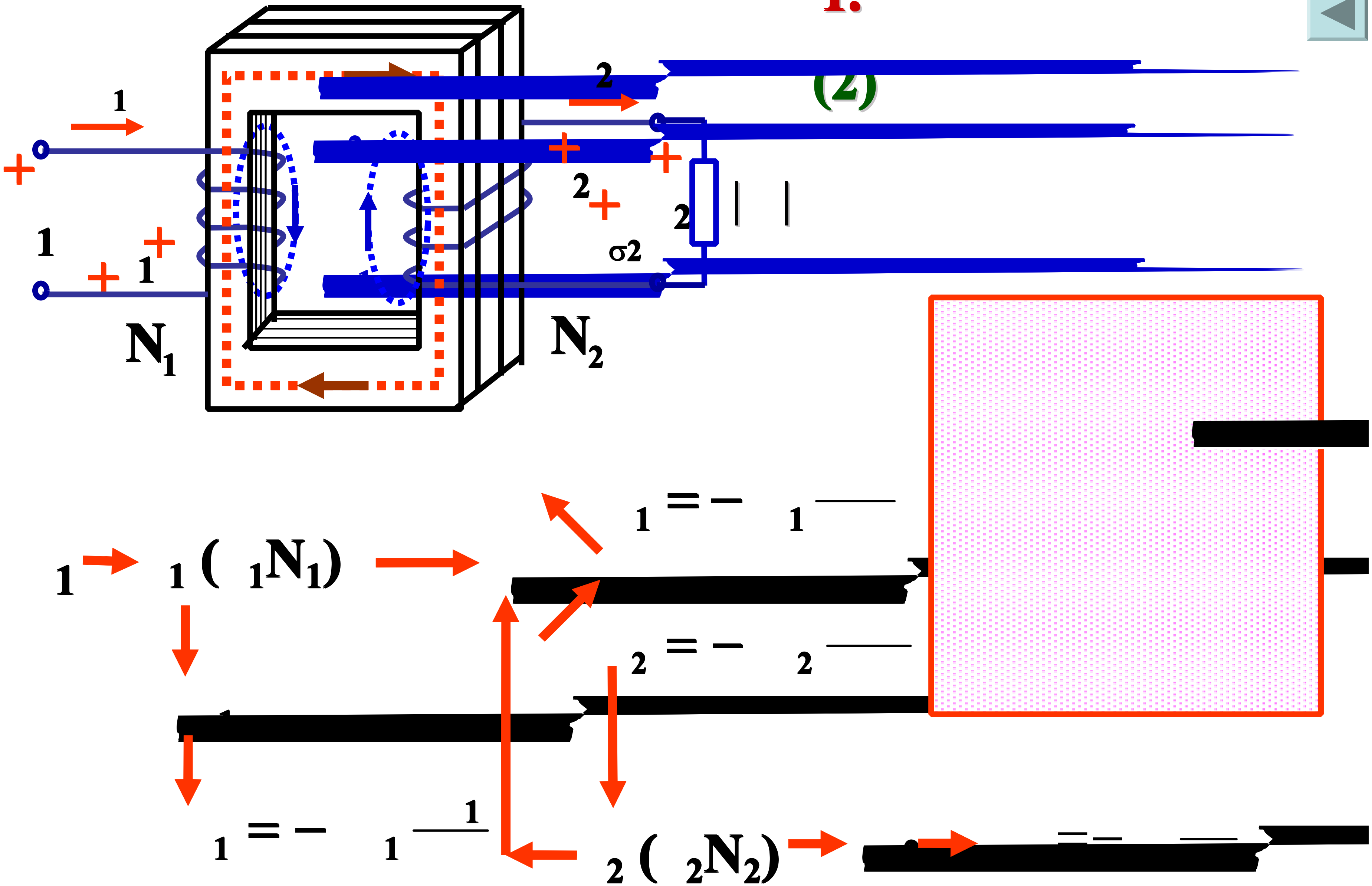
1.

(1)





1.



2.

(1)

$$\Phi = \Phi$$

$$= - \quad \frac{\Phi}{} = - \quad \Phi$$

$$= - \quad _1$$

$$= \quad _1 \qquad (\quad -90°)$$

:

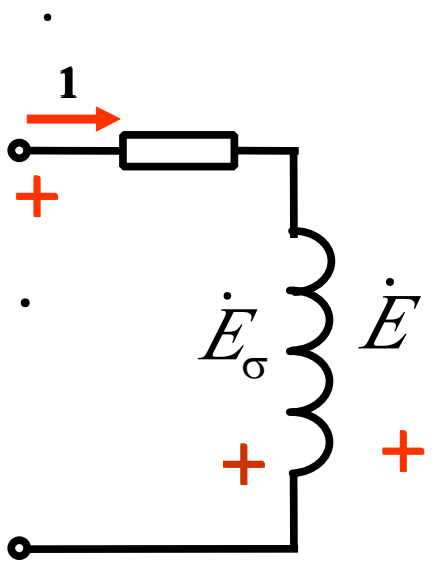
$$_1 = \frac{_1}{\sqrt{2}} = \frac{2 \quad _1\Phi}{\sqrt{2}}$$

$$_1 = 4.44$$

$$_2 = \quad _2 \qquad (\quad -90°)$$

$$_2 = 4.44$$

(2)



KVL

. . . .
1 = 1 .1 − 1 − 1 .
= 1 1 + 1 1 − 1

;

1

1= σ1 (

)

1 1 1 ( )

, 1

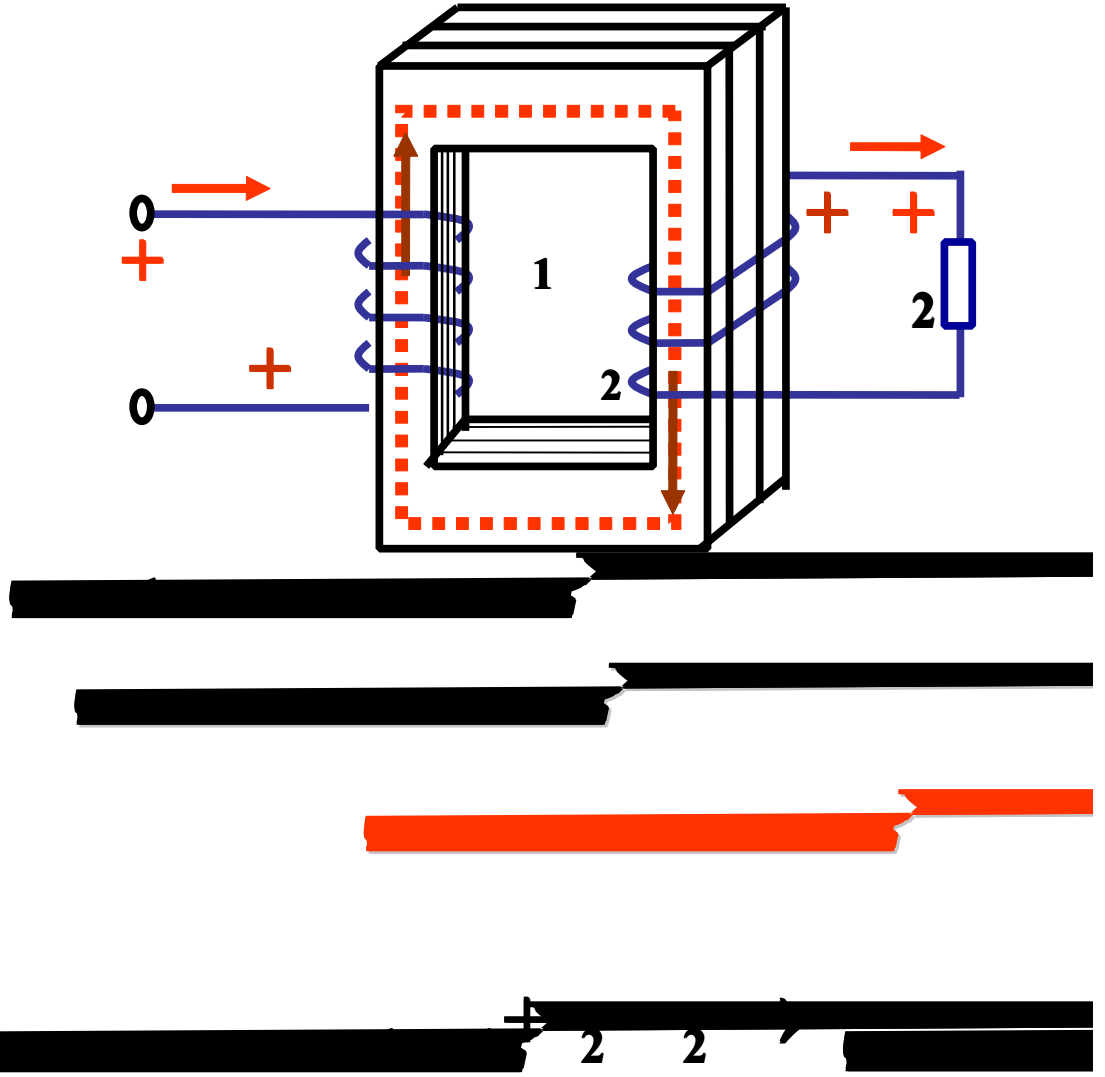
. .
1 ≈ − 1 → 1 ≈ 1 = 4 44

KVL

$$\mathcal{E} \approx E = \mathcal{E} =$$

3. ( )

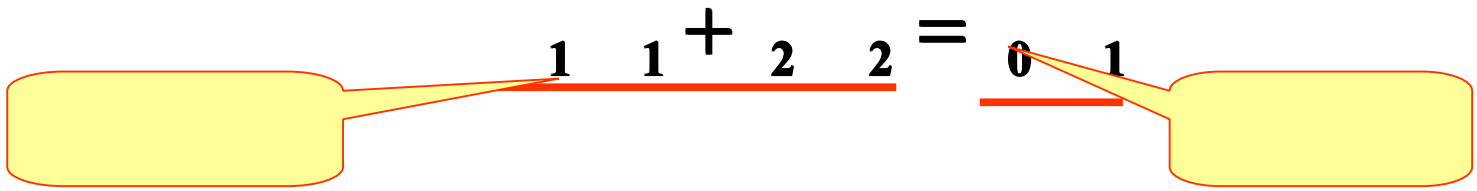
$\rightarrow$ $=$ ——



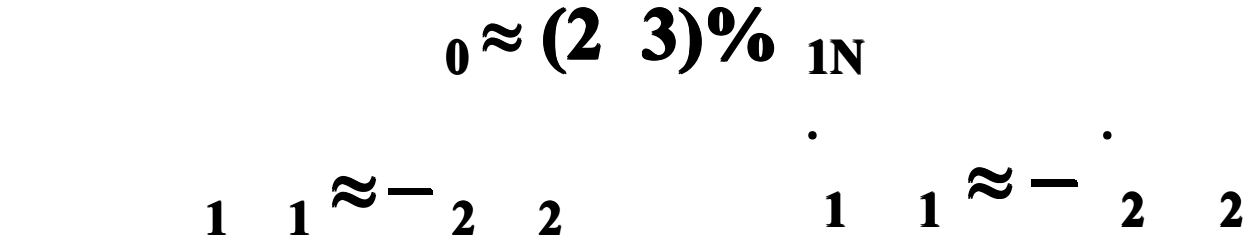
$_1 \approx \ _1 = 4\ 44$

1

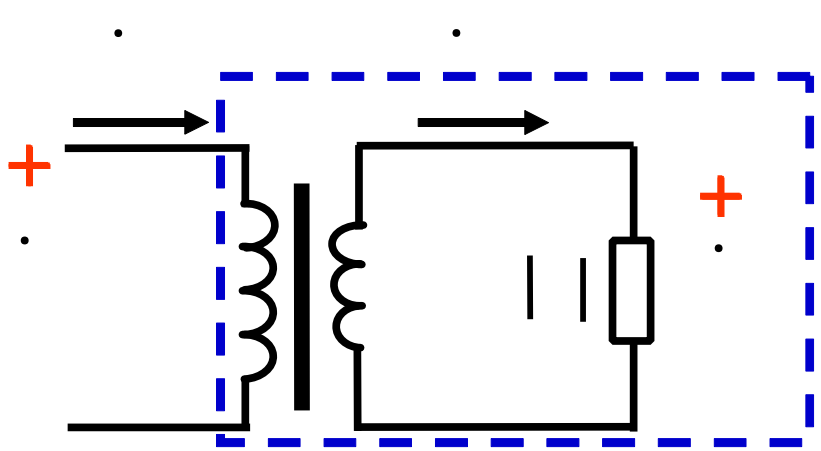
$0 \quad 1 \rightarrow$ $\quad 2 \quad 2$

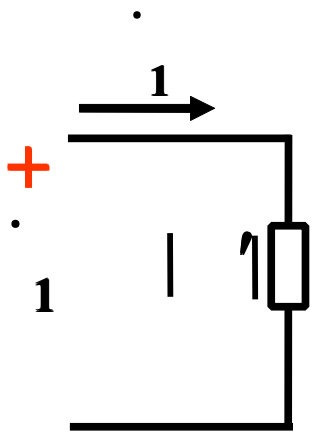



1.
2.



4.





$$|\ \ | = \frac{2}{2}$$

$$|\ \ ' | = \frac{1}{1}$$

$$|\ \ ' | = \frac{}{} = \frac{}{} = \frac{}{} = |\ \ |$$

$$|\ \ ' | = |\ \ |$$

2

1:

= 120V **$_0$=800**

Ω

=8Ω **: (1)** **L**

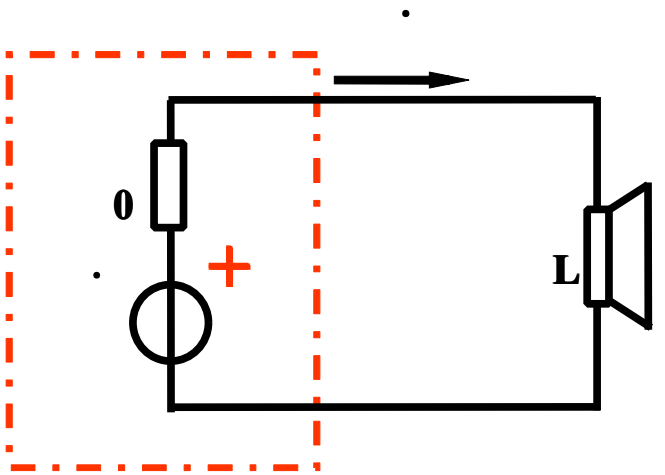
′ =

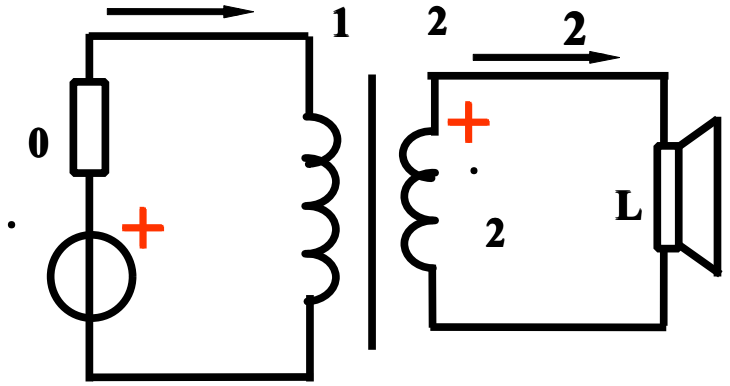
2

,

: (1)

= —— = $\sqrt{\frac{\prime}{}}$ = $\sqrt{\frac{}{}}$ =





$$= \left(\frac{}{_0 + {}'_L} \right)^2 \times {}'_L = \left(\frac{120}{800 + 800} \right)^2 \times 800 = 4\ 5\ \mathrm{W}$$

2

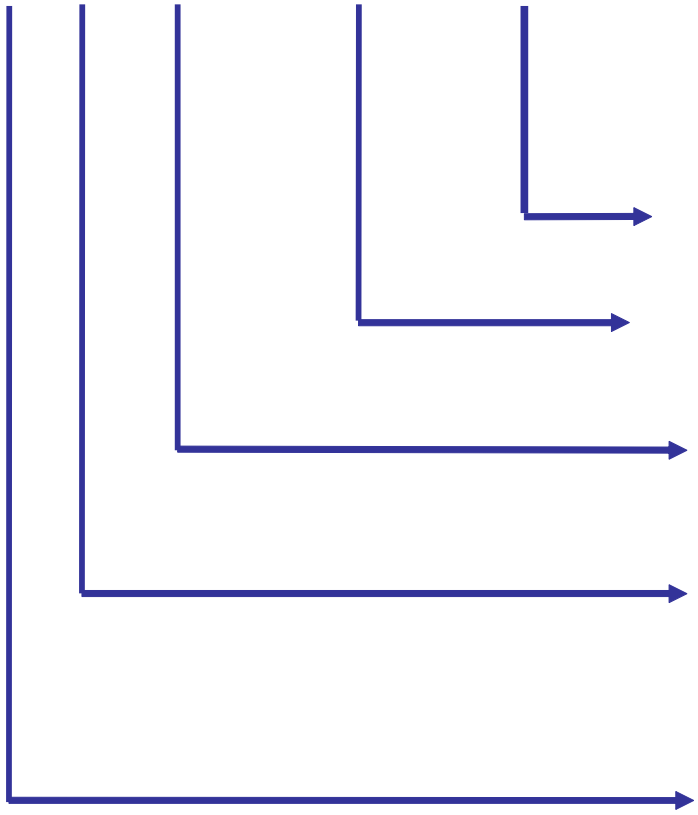
$$= \left(\frac{}{_0 + {}_L} \right)^2 \ {}_L = \left(\frac{120}{800 + 8} \right)^2 \times 8 = 0\ 176\ \mathrm{W}$$

$${}'_L = \ {}_0$$

5.

1)

S J L —1000/10



(V)

(VA)

J:

F:

S:

D:

2)

1N 2N

1N

2N

1N 2N

1N 2N

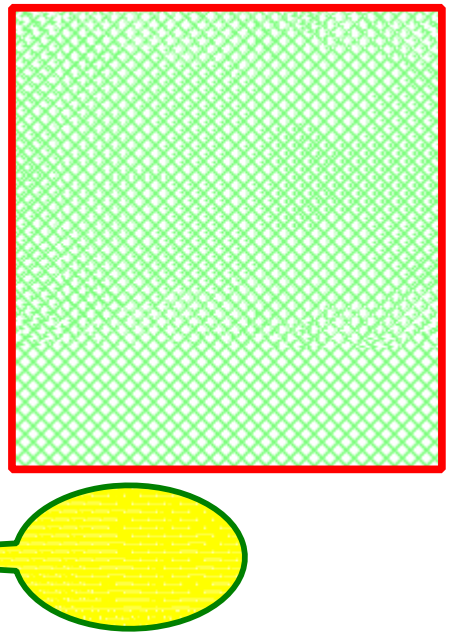
2)

N

$$\begin{cases} {}_{N} = {}_{2N}\ {}_{2N} \approx {}_{1N}\ {}_{1N} \\ {}_{N} = \sqrt{3}\ {}_{2N}\ {}_{2N} \approx \sqrt{3}\ {}_{1N}\ {}_{1N} \end{cases}$$

( )

$$\begin{cases} {}_{N} = {}_{1N} \times {}_{1N} \\ {}_{2} = {}_{2}\ {}_{2}\ c \\ {}_{1} = \frac{2}{} \end{cases}$$



$N \neq 2$

$1 \neq 2$

6.3.3

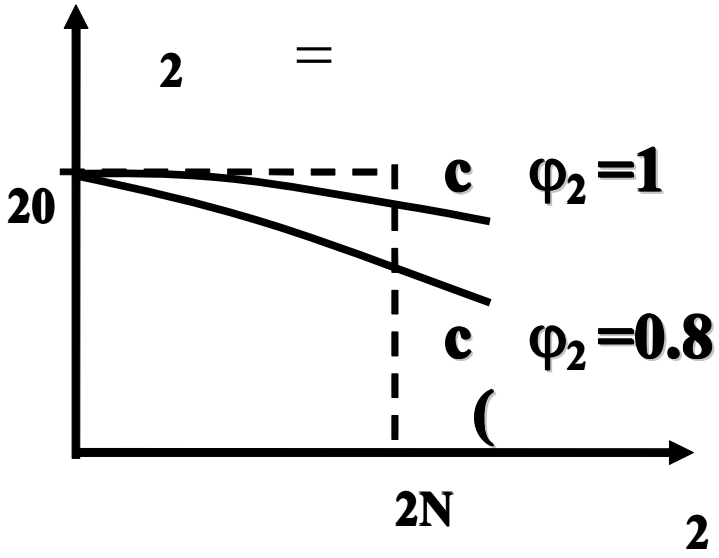
1.

1 c 2

2 2 = (2)

20

2 =



$$\Delta \quad \% = \frac{20 \quad - \quad 2}{20} \times 100\ \%$$

2 2

5%

2.

(Δ_C)

(Δ_F)

$$= \frac{2}{1} = \frac{2}{2 + C + F}$$

95% ,

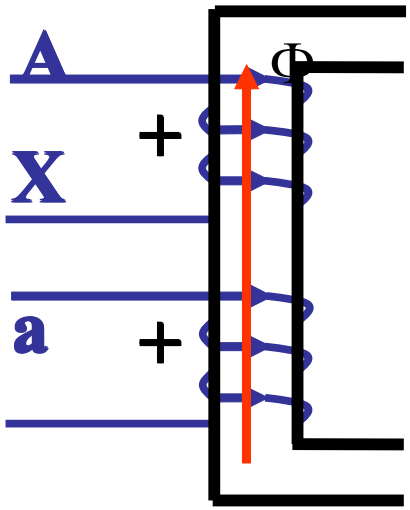
(50 75)% ,

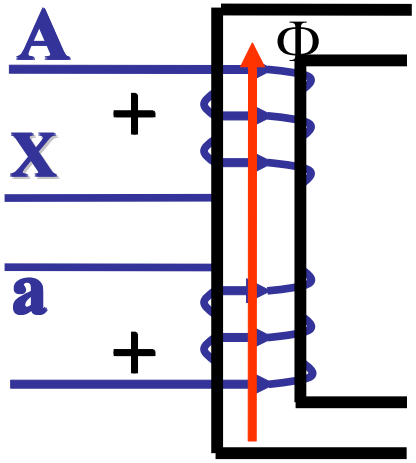
6.3.4

1. **( )**

(

(

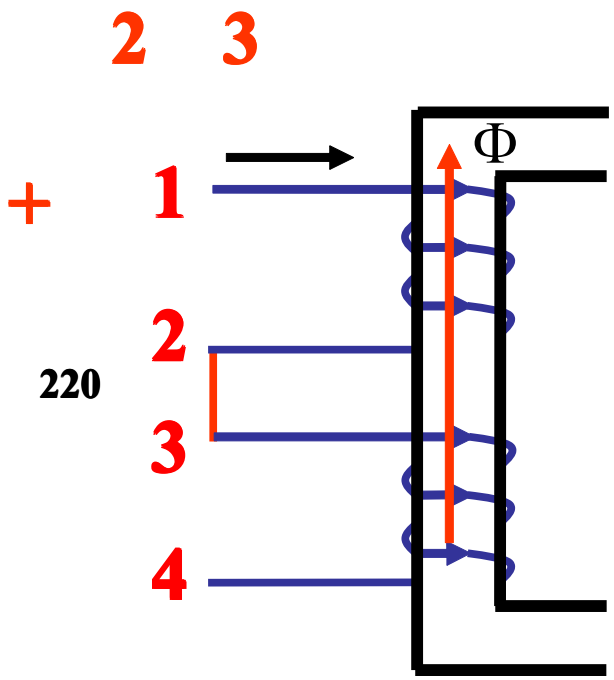




2.

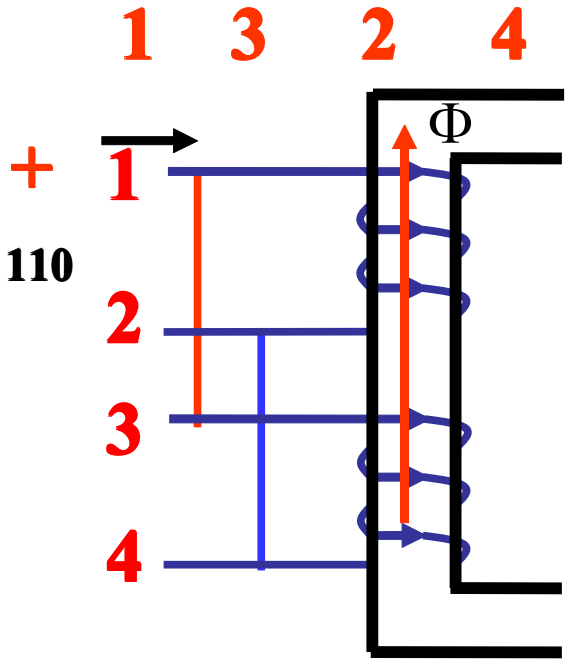
110V

220V



$$= \frac{220}{4.44\ (2\ \ )}$$

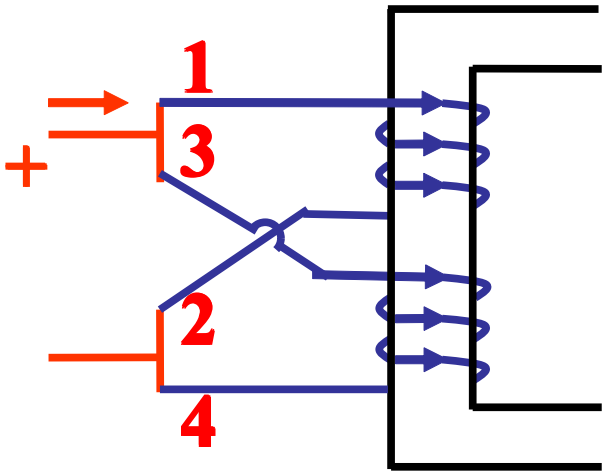
110V



$$= \frac{110}{4.44\ (\ \ )}$$

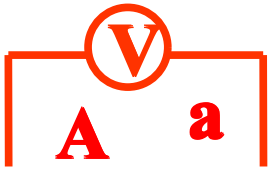
(220/110)

1 110V



2

$$1 = 1 \quad 1 - 1 \qquad 1 = \frac{}{1}$$



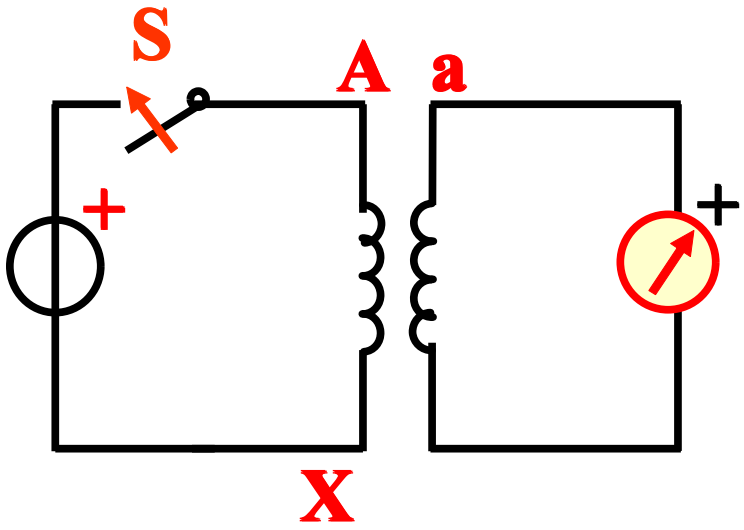
(X -) ,

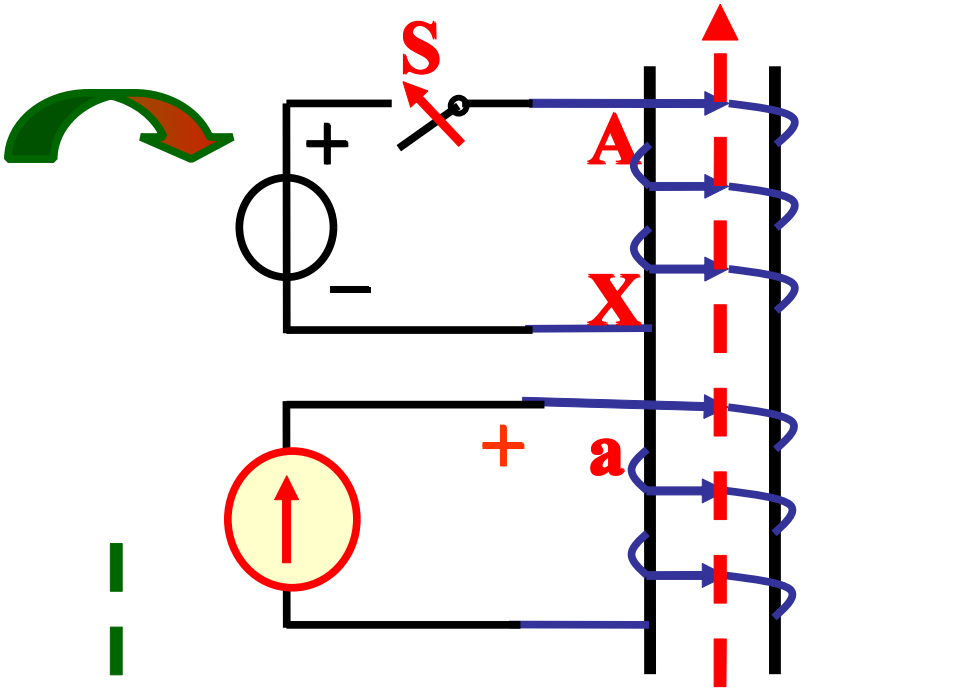
AX AX

AX Aa a

A a X

A X a





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6.3.5

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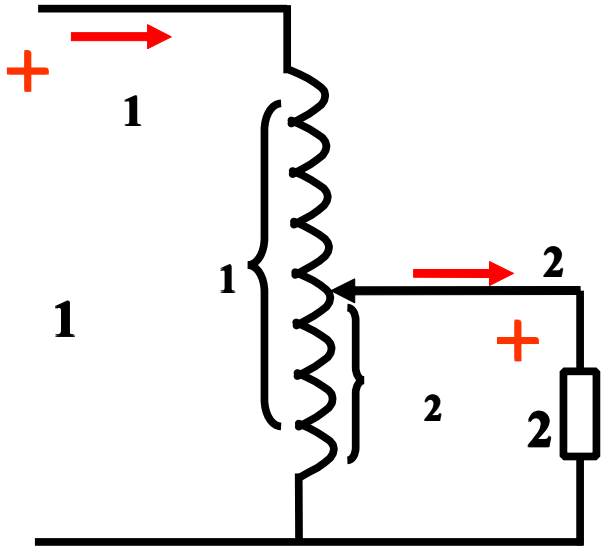
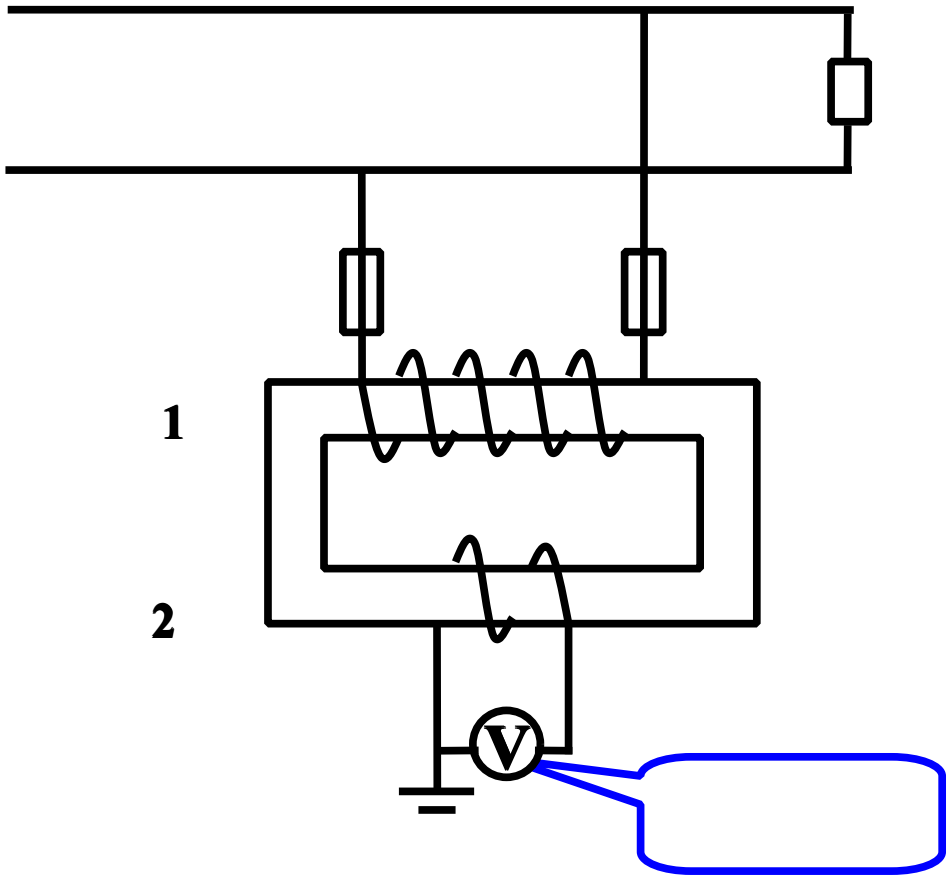


2.

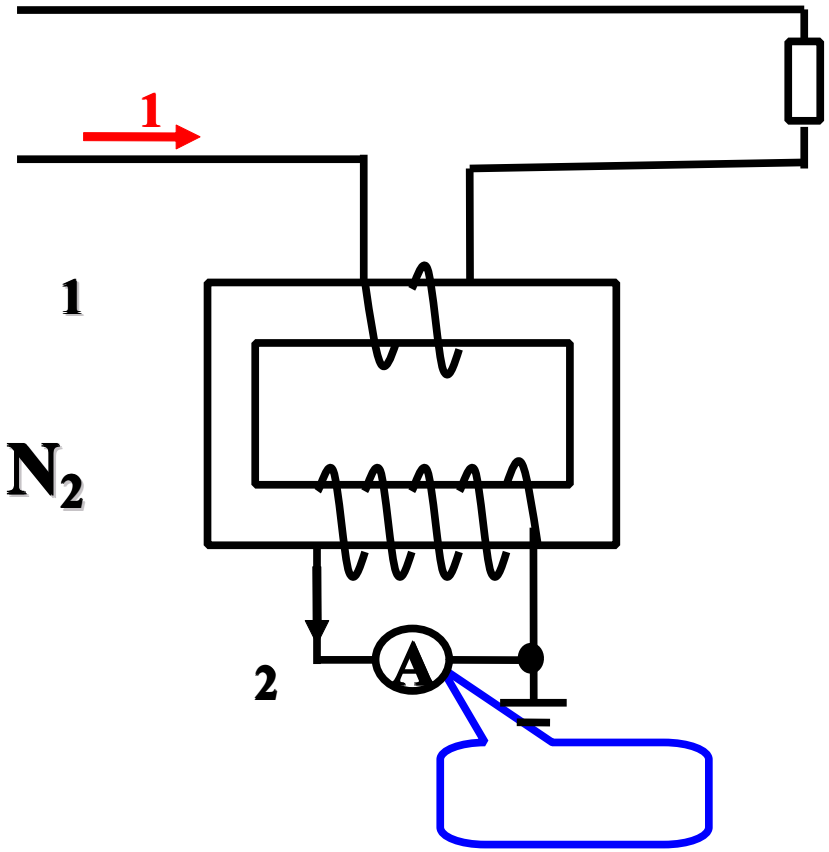


1.

2.

= × 1/ 2

3.



1.

2.

$$= \quad \times \quad {}_2/{}_1$$