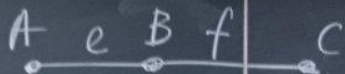
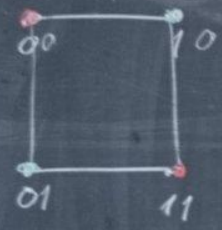
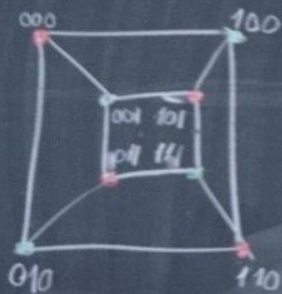
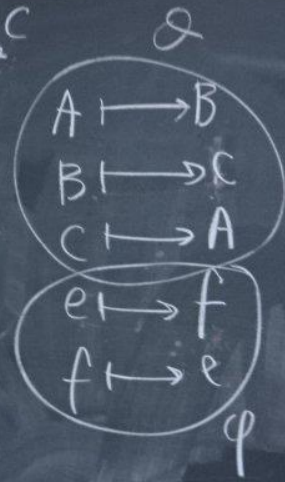


11  
01



$A \mapsto A$   
 $B \mapsto B$   
 $C \mapsto C$   
 $e \mapsto e$   
 $f \mapsto f$



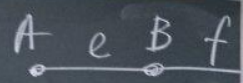
$e$  joins  $A$  with  $B$   
 $\phi(e) = f$  joins  $B$  with  $C$   
 $\partial(A) \quad \partial(B)$

$f$  joins  $B$  with  $C$   
 $\phi(f) = e$  joins  $A$  with  $B$   
 $\partial(C) \quad \partial(A)$

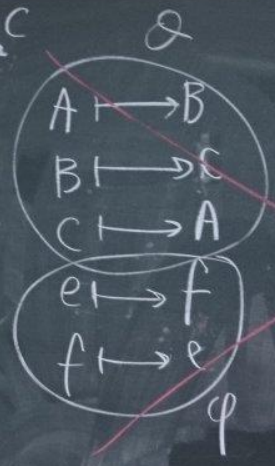
wrong

$A \mapsto C$   
 $B \mapsto B$   
 $C \mapsto A$   
 $e \mapsto f$   
 $f \mapsto e$

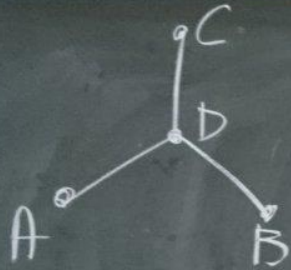
$e$  joins  $A$  with  $B$   
 $\varphi(e) = f$  joins  $B$  with  $C$   
 $\partial(B) \quad \partial(A)$   
 $f$  joins  $B$  with  $C$   
 $\varphi(f) = e$  joins  $A$  with  $B$   
 $\partial(C) \quad \partial(B)$   
 OK



$A \mapsto A$   
 $B \mapsto B$   
 $C \mapsto C$   
 $e \mapsto e$   
 $f \mapsto f$   
 identity



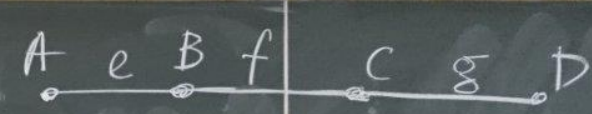
~~$e$  joins  $A$  with  $B$   
 $\varphi(e) = f$  joins  $B$  with  $C$   
 $\partial(A) \quad \partial(B)$   
 $f$  joins  $B$  with  $C$   
 $\varphi(f) = e$  joins  $A$  with  $B$   
 $\partial(C) \quad \partial(A)$   
 Wrong~~



$A \mapsto C$   
 $B \mapsto A$   
 $C \mapsto B$   
 $D \mapsto D$

$A \mapsto B$   
 $B \mapsto C$   
 $C \mapsto A$   
 $D \mapsto D$

$A \mapsto B$   
 $B \mapsto A$   
 $C \mapsto C$   
 $D \mapsto D$





$$\delta \leq 2 \frac{\varepsilon}{\nu} \leq \Delta$$

$$\delta \nu \leq 2 \varepsilon \leq \Delta \nu$$

$$\delta \leq d(v_1) \leq \Delta$$

$$\delta \leq d(v_2) \leq \Delta$$

...

$$\delta \leq d(v_\nu) \leq \Delta$$

$$\frac{\nu \delta}{\nu \delta} \sum_{i=1}^{\nu} d(v_i) \leq \frac{\nu \Delta}{\nu \Delta} \leq 2 \varepsilon$$