

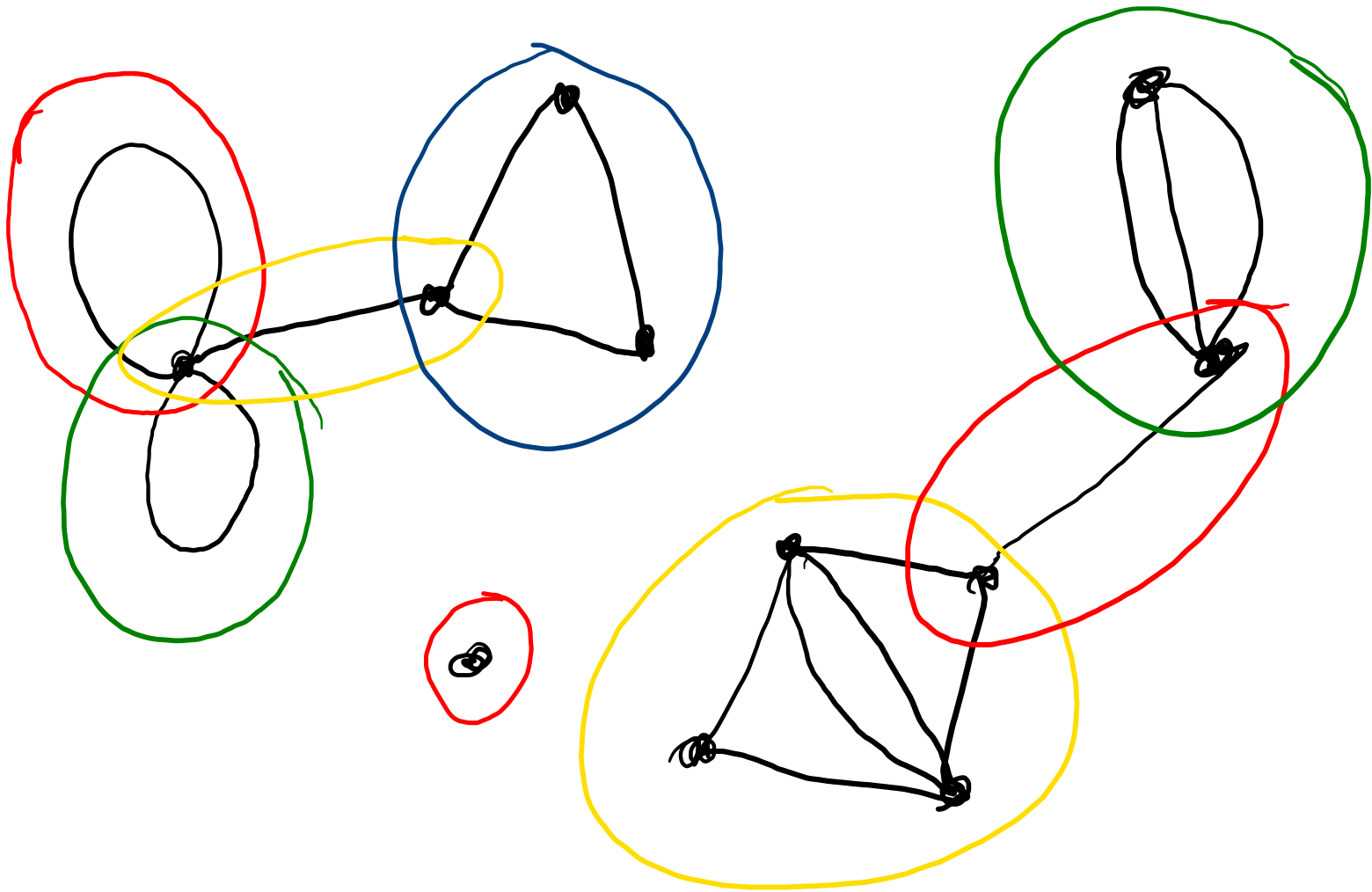
$$\delta \geq 2$$

$$2 \leq d(v_1)$$

$$2 \leq d(v_2)$$

$$\begin{array}{r} 2 \leq \vdots + d(v_n) \\ \hline 2 \cdot n \leq 2\varepsilon \end{array}$$

$\varepsilon \geq n \Rightarrow G$ is NOT a tree
 of G is NOT a tree but it is connected, so it contains a cycle



$A \implies B$
 this is defined as equivalent to $A \implies B$

$(\neg A) \vee B$
 (not A) or B

C	D	$C \vee D$
T	T	T
T	F	T
F	T	T
F	F	F

A	B	$\neg A$	$(\neg A) \vee B$
T	T	F	T
T	F	F	F
F	T	T	T
F	F	T	T

IMPORTANT:

$A \Rightarrow B$ is NOT equivalent to $B \Rightarrow A$

Also important:

$A \Rightarrow B$ IS equivalent to $(\neg B) \Rightarrow (\neg A)$
called the
"contrapositive"
of $A \Rightarrow B$

$(\neg B) \Rightarrow (\neg A)$
is equiv. to

$(\neg(\neg B)) \vee (\neg A)$
is equiv. to

$(\neg A) \vee (\neg(\neg B))$
is equiv. to

$(\neg A) \vee B$
is equiv. to
 $A \Rightarrow B$

(From linear algebra)

Thm.:

$$A \text{ similar to } B \Rightarrow \det A = \det B$$